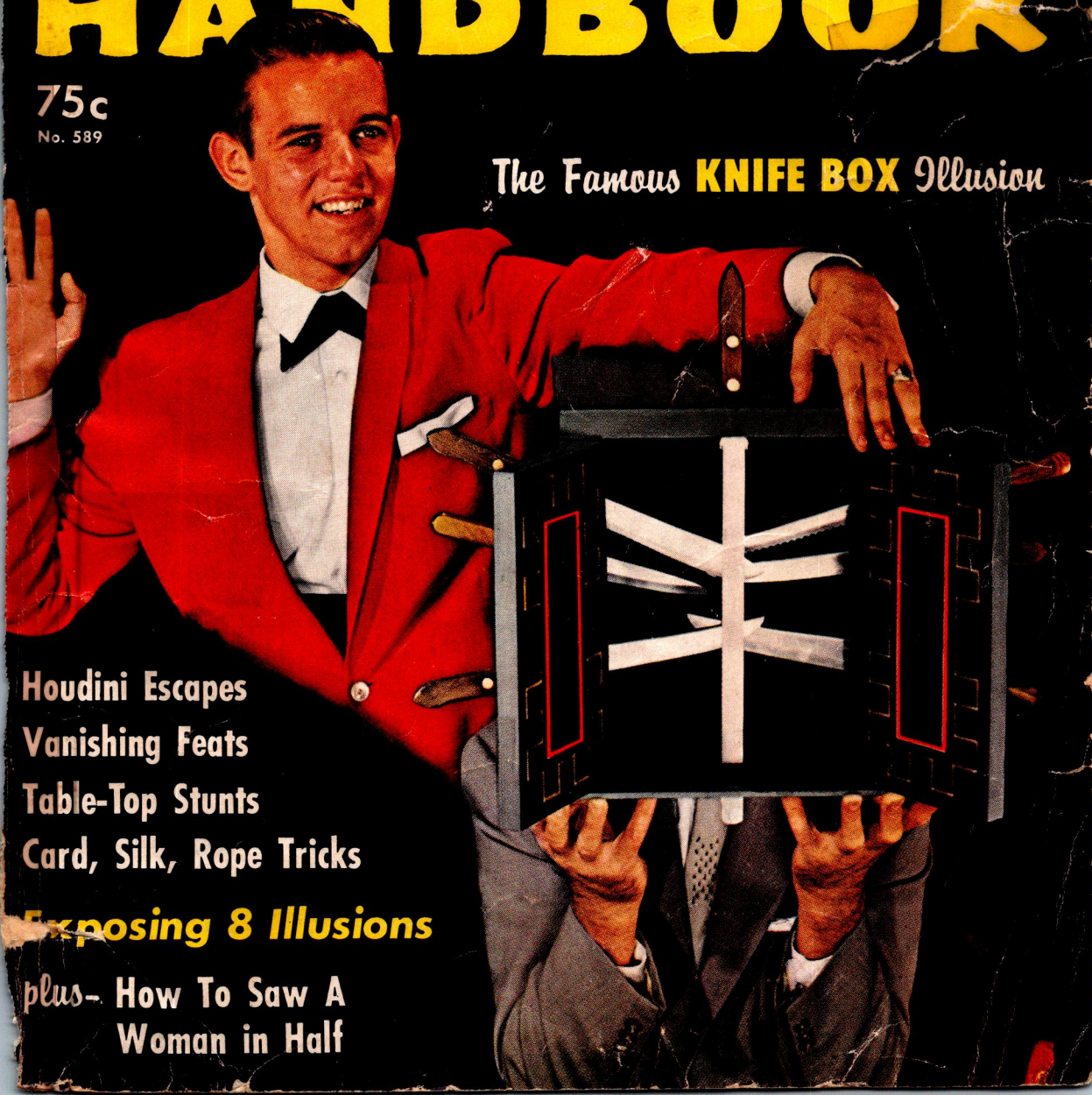
SCIENCE and MECHANICS

100 LIFE-OF-THE-PARTY TRICKS

MAGIC HANDBOOK

75c
No. 589

The Famous KNIFE BOX Illusion

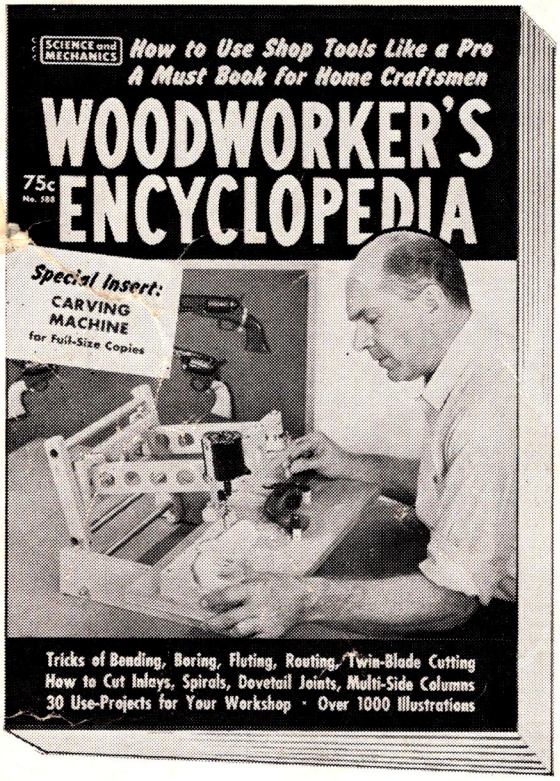


Houdini Escapes
Vanishing Feats
Table-Top Stunts
Card, Silk, Rope Tricks

Exposing 8 Illusions

plus– How To Saw A Woman in Half

How to Stub Your Toe on a Wooden Fortune



The Book That Shows You The How In WOOD-WORKING

The Complete Text for the Beginning and Advanced Amateur Woodworker

Imagine! In one volume, complete and detailed show how articles on all the intricacies of wood-working. Bending wood—Fluting—Dovetail joints, and many more tricks of the pro woodworker. They're all made easy in step by step illustrations. Plus over 30 useful woodworking projects to make in your own workshop. Whether your woodworking is for fun or profit, this is a book that belongs in your workshop. Pick up a copy at your newsstand or send $1.00 with the coupon below for your copy.

SCIENCE AND MECHANICS MAGAZINE
Dept. 3090, 505 Park Avenue
New York 22, New York

Enclosed is $1.00; please send me my copy of Woodworker's Encyclopedia—588

NAME .....

ADDRESS .....

CITY..... ZONE..... STATE.....

ON SALE

Dec. 5th

at most newsstands

BE THE LIFE OF THE PARTY

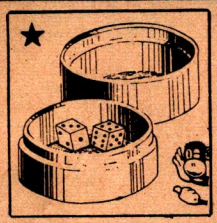
EASY TO DO TRICKS

MULTIPLYING BILLIARD BALLS. Hold one ball in your hand. Suddenly it becomes 2 balls, then 3 balls, then 4 balls. By reversing moves the balls silently vanish one by one. Always gets applause! Easy to do. A great trick. Very sensational.

No. B1438. Price.....50¢

MAGIC WATER VASE. Show it empty and then pour out water. Show it empty again and pour out more water. Again and again you do this until they get thirsty just watching. It's uncanny, mysterious and unbelievable. Fools everybody.

No. B1347. Price....$1.50

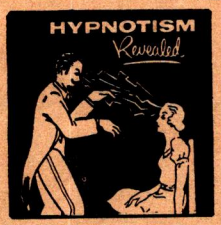


MYSTERIOUS DICE BOX. Close this box, shake it and you can turn up any combination desired. Also predict *in advance* numbers that will be thrown. You can even use borrowed dice. Can be examined but they never learn its secret.

No. B1671. Price....$1.00

FLOWERS FROM FINGER-TIPS. First you show empty hand. Then you reach into the air and produce flower after flower throwing them into a hat. But wait! When they look into the hat all the flowers have vanished. Easy to do.

No. B1562. Price....59¢

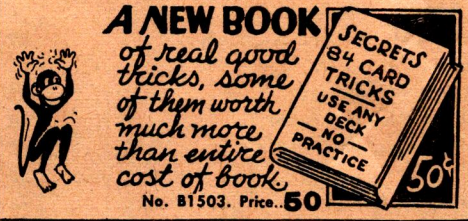


HYPNOTISM REVEALED. 11 complete lessons on how to hypnotize others including astonishing "sleep & learn" technique. How to sway others at will. Master the secrets of subconscious thinking, post hypnotic suggestions, self-hypnosis, etc. Written by an expert. An amazing book. Good buy.

NO. B1491, Price ..$1.00

36 CARD TRICKS. A big assortment of Professional Card Tricks especially selected for the amateur. Can be easily performed with any deck of cards. Very little practice required and you're an expert on baffling card tricks. Mystify others for hours. Even the old-timers like this. Great fun for everyone.

NO. B1577, Price .. 50¢



No. B1503. Price..50

PLEASE ADD 25¢ POSTAGE AND HANDLING ON ALL ORDERS

BEST BLINDFOLD TRICK. Now you can amaze and entertain anyone blindfolded. All sorts of clever tricks. And listen! They not only put a blindfold around your eyes but they also slip a bag over your head and tie it. STILL YOU CAN SEE!! It's a miracle! Closely guarded secret. Worth $5.00. Excellent.

No. B1275, Price .... 50¢

FAMOUS MAGIC DECK. Now perform hundreds of professional card tricks. Deck looks like an ordinary deck of cards but contains over 12,000 secret marks so you know where all cards are at all times. Easy as telling time. Complete with instructions for many tricks. Hours of fun for you

NO. B1665, Price ..$1.50

Amazing Vanishing Head

Place carton over anyone's head. Open door and head is GONE! They see right through box to rear where your hand is moving. Complete secret instructions. Do it yourself.

$1.00

Floating-Dancing Handkerchief

Floats in air! Then dances, jumps, leaps. Will even keep time to music. You can even walk away while it is dancing. Obeys your commands.

$1.00

1000 MORE TRICKS YOU CAN DO!

WORLD'S GREATEST FUN AND MAGIC CATALOG

ONLY 25¢

RUSH YOUR ORDER TODAY!

It's a Knockout! Over 160 Pages! 700 Pictures! Laughs! Fun! Jokes! Tricks! Stunts! Magic! Surprises! Novelties! Most sensational book ever published. Hundreds and hundreds of exciting tricks you'll want to do. Rush name, address and only 25¢ today! Hurry! We'll rush catalog to you post paid.

FREE TRICK GIVEN WITH EACH BOOK

THE HOUSE OF A THOUSAND MYSTERIES

DEPT. SMH TRUMBULL, CONNECTICUT

SCIENCE and MECHANICS

MAGIC HANDBOOK

1962 EDITION

COVER STORY

Famous Knife Box Illusion 11

EXCLUSIVE FEATURE

Escapes—Special Form of Magic 87

GENERAL FEATURES

About Magic 7
Magic Black-Art Table 34
Magical Appliances 146
Present Your Own Magic Show 150

40 MAGIC PROJECTS TO BUILD AND PERFORM

Sliding Die Box 15
Wrist Chopper 18
Cake in a Hat 20
Card Found in a Balloon 26
Crystal Casket 29
Mental Pack 31
Glass Balanced on Card 32
Appearing Card in a Frame 33
Vanishing Glass of Water 37
Traveling Wand 38
Vanishing Made Easy 40
Vanishing Glass of Milk 42
Evaporating Milk 45
Small Silk to Full-Size Egg 47
Breakaway Vanishing Box 49
Matchbox and Ribbon Mystery 53
Close-up Rising Cards 57
Handkerchief Production Cabinet 58
Spirit Slate Trick 61
Spooky Card Trick 62
Cabalistic Cube 64
Baffling Blocks 67
Three Silk Tricks 70
Candle from the Pocket 73
Strange Riddle of Magnetic Milk 75
Flash Production Tube 77
Penetration of Solid Through Solid 79
Chemical Magic 81
Tube and Ropes 85
Escape from a Packing Box 92
Wrist Stock Escape 94
3-Dimensional Jigsaw Perplexture 96
Ink into Water 97
Flying Handkerchief 105
Making and Solving Puzzles 107
Chinese Rice Canisters 113
Confetti Becomes Candy 116
Produce Beautiful Silks 118
Vanishing Bowl of Water 120
Block, Frame, and Ribbon Trick 128

TABLE-TOP MAGIC

21 Table-Top Tricks 99
Sleight-of-Hand Tricks 122
Complete List of Table-Top Tricks 4

8 FAMOUS STAGE ILLUSIONS, index on page 4

Cover by Bill Wadkins

B. G. DAVIS
Publisher

JOEL DAVIS
Assistant Publisher

Published and Copyrighted 1961 by
SCIENCE AND MECHANICS PUBLISHING COMPANY
A Subsidiary of Davis Publications, Inc.

450 East Ohio Street **Chicago 11, Illinois**

MAGIC HANDBOOK, first edition, contains a generous selection of fascinating magical treats ranging from the simplest table-top stunts to the most elaborate and expensive stage illusions. It is intended as a text for all magicians—newest amateur recruits and the most accomplished professionals alike—who want to know how to build their own tricks, as well as how to perform them.

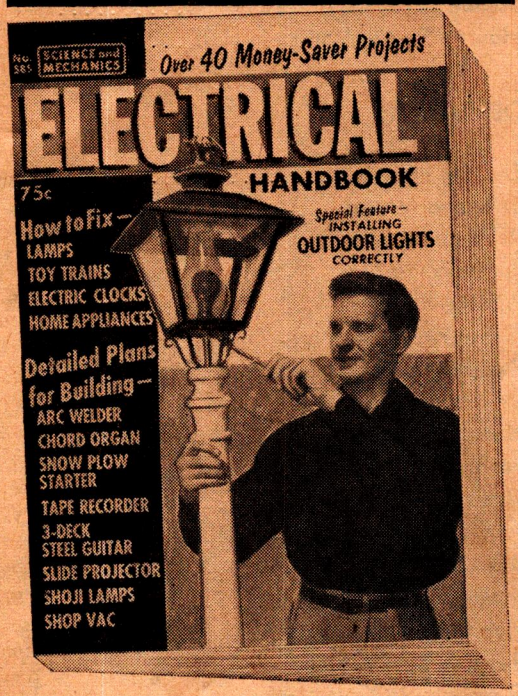
SCIENCE and MECHANICS Handbook No. 18, 1961—No. 589

ART YOUNGQUIST
Editor
GARRY WINTER
Managing Editor
LYNELL A. JOHNSON
Assistant Editor
LEROY R. KIETZMAN
Assistant Editor
BILL WADKINS
Art Director
WAYNE WILLE
Managing Editor
Science and Mechanics
JOHN ROSS
Advertising Director

Advertising Offices: Chicago: 450 E. Ohio St., WH 4-0330; New York: 505 Park Ave., PL 2-6565; Los Angeles: 1830 W. Olympic Blvd., DU 3-3580.

ON SALE NOW!

at most newsstands



Complete plans for 40 Home Electrical Projects

- ★ How to Buy a Room Air Conditioner
- ★ Modernizing Old Vacuum Cleaners
- ★ Servicing Electric Clocks
- ★ First Aid for Ventilating Fans

On sale at your newsstand or send 75¢ with coupon below for your copy

Science and Mechanics Magazine
Dept. 3095, 505 Park Avenue
New York 22, N. Y.

Enclosed is 75¢, please send me my copy of Electrical Handbook—585

NAME.....

ADDRESS.....

CITY.....ZONE....STATE.....

BE A MAGICIAN!

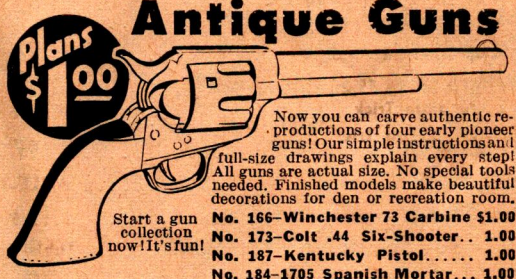
WE'LL SEND YOU:

(1) Latest Trick Catalog
(2) Magic Book Catalog
(3) Sample issue of our Trick Talk magazine
(4) Instant Comedy Card Locator Trick

ALL for $1.00 sent to:

THE IRELAND MAGIC CO.
109 North Dearborn Street
Chicago 2, Illinois

Antique Guns



Start a gun collection now! It's fun!

Now you can carve authentic reproductions of four early pioneer guns! Our simple instructions and full-size drawings explain every step! All guns are actual size. No special tools needed. Finished models make beautiful decorations for den or recreation room.

No. 166–Winchester 73 Carbine $1.00
No. 173–Colt .44 Six-Shooter.. 1.00
No. 187–Kentucky Pistol..... 1.00
No. 184–1705 Spanish Mortar... 1.00

SPECIAL! Order all four at the special price of only $3.00—a saving of 25%.

SCIENCE AND MECHANICS
505 PARK AVENUE, DEPT. 2155, NEW YORK 22, N. Y.

Toys and Games You Can Make

● If the high cost of giving is getting you down, get a copy of *Toys and Games You Can Make*, a book containing detailed plans and building instructions for over 80 different toys, games and playthings. Ideal for gifts to children—children from two to twenty—the construction projects in this book will save you money while you enjoy yourself making them. *Toys and Games You Can Make* (No. 556) is available in a deluxe, rugged, special hardbound edition for your shop reference library from Dept. 529, SCIENCE AND MECHANICS, 450 East Ohio Street, Chicago 11, Illinois. $1.95.

8 FAMOUS STAGE ILLUSIONS

Egyptian Torture Cabinet 23
Thurston's Rising Card Trick 54
Cannon and Trunks 130
Upside Down Mystery 132
Thurston's Spirit Cabinet 135
Floating Piano 138
Million Dollar Mystery 140
How to Saw a Woman in Half 143

68 TABLE-TOP TRICKS

Record Lights Tube 22
The Reappearing Ball 36
Cord-Arm Escape 39
Obedient Matchbox 39
Card Sharp 44
The Floating Straw 46
What Brand? 46
Tug of War 60
Cutting the Cards 66
A Light Matter 74
Confetti from an Egg 76
Dry Sand 76
Hot Money? 84
Pocket Mind Reading 84
Cord Through Wrist 93
Matches Meet Their Match 95
Card Stands on End 98
Where Does the Money Go? 98
Magnetic Personality? 99
Pop!—Goes the Pencil 99
Ball Space Rider 100
No Strings on These Rings 100
Now You See It; Now You Don't 100
Quick-Change Checkers 100
What Makes It Float? 100
Diving Eye Dropper 101
One or Two Balls 101
"Thin Air" Force 101
Flaming Fission 102
Human Egg Factory 102
Pencil-in-the-Box 102
Seeing with Your Hands 102
Magnetic Paper 103
Name the Color 103
The Six Pile 103
Balanced Water 104
Drink Up 104
Juice Writing 104
Pull the Paper 104
Chew Two Strings into One 106
Rearranging Molecules 115
Written in the Cards 115
Name the Coin 122
Perfect Balance 122
Three Coins into Four 122
A Floating Filter 123
Box Up Your Sleeve 123
Make Dimes Disappear 123
Pick the Card 123
Reverse Shell Game 123
Carry Fire in Your Hands 124
Disk Meets Coin 124
Flip a Coin 124
Magnetic Fingertips 124
Disappearing Match 125
Domino Numbers 125
Match Tongs 125
Water-Drinking Spirits 125
Cigarette Follows Lead 126
Coin from an Empty Box 126
Disappearing Sugar 126
Shifting Dice 126
The Shell Game 126
Matches Obey Command 127
Orange Picking 127
Stand Match on End 127
The Uncut Paper 127
Drop the Coin 137

The editors sincerely thank William B. Gibson, Sidney H. Radner, Litzka Raymond, and Victor D. Dressner, for their invaluable assistance in the preparation of this book.

ON SALE NOW!

at most newsstands

Step-by-Step building instructions for over 50 projects

Build your own belt sander

Making a modelmakers arbor press

Multipurpose work bench

On sale at your newsstand or send $1.00 with coupon below for your copy

Science and Mechanics Magazine
Dept. 3096, 505 Park Avenue
New York 22, N. Y.

Enclosed is $1.00, please send me my copy of Home Workshop—584

NAME.....

ADDRESS.....

CITY.....ZONE....STATE.....

SEE THE HYPNOTISM AD ON THE BACK COVER

Mail to: HYPNOTIC AIDS, Dept. PX-2
1133 Broadway, N. Y. 10, N. Y.

Send the following items in a plain, unmarked package. I understand I may return them within 10 days for a FULL REFUND, no questions asked.

☐ Record $3.95 ppd. ☐ Whirlascope $13.95 ppd.
☐ Disg. Hyp. $1.98 ppd. ☐ Hypno-Coin $1.00 ppd.
☐ Testing Kit $1.98 ppd. ☐ S.H. Book $3.95 ppd.
☐ FREE Book Total Enclosed $_____

Send to:
Name .....
Address .....
City .....State .....

WORLD'S FINEST MAGIC CATALOG
Never Anything Like It

3000 MAGIC TRICKS LISTED. Pocket, Parlor, Stage Tricks—Cards, Coins, Cigarettes, Mindreading, Illusions, Magic Books, etc. Profusely illustrated. For $2.50 we send you our Giant 408-Page Catalog, together with $2.00 worth of magic free.

KANTER'S MAGIC SHOP, H-1311 Walnut, Phila. 7, Penna.

Catalog OF 2700 Novelties 10c

New

1962 edition World's Biggest Novelty Catalog. Live animals, scientific supplies, hobbies, funmakers, planes & boats, looms, magic tricks, joke articles, unusual seeds, gadget timesavers, cameras, optical goods, projectors, movies, lucky jewelry, religious novelties, disguises, musical instruments, stamps, coins, puzzles, fortune tellers, radios, auto & bike accessories, telescopes, magnifiers, compasses, banks, smokers' gadgets, artists' supplies, printing sets, engines, motors, shockers, knives, billfolds, fireworks, guns, rifles, sports, books, games, plants, etc. Send name, address & 10¢ to:
Johnson Smith Co., Dept. 521, Detroit 7, Michigan

78 *Toys and Games You Can Make*

OUR 192-page book TOYS AND GAMES YOU CAN MAKE gives detailed plans for making 78 action toys, thrilling games and fascinating playthings (15 of the projects can be completed in just one evening). Only ordinary hand tools are needed, and our simple, easy-to-follow plans show you exactly HOW to proceed. The detailed drawings, photographs, materials lists and step-by-step instructions make it easy as A-B-C.

ORDER YOUR COPY—NOW!

SCIENCE and MECHANICS MAGAZINE, Dept. 528
505 Park Avenue, New York 22, N. Y.

Enclosed is $1.95, for which send me, all charges prepaid, a copy of the deluxe edition of your 192-page handbook, TOYS AND GAMES YOU CAN MAKE. If I am not completely satisfied, I may return the handbook within 5 days for full refund. I take no risk.

NAME_____

ADDRESS_____

CITY_____ZONE___STATE_____

ON SALE NOW! at most newsstands

ABOUT MAGIC

MAGIC, today, is a fascinating hobby that combines skill with mechanical ingenuity to produce surprising mystery. Its art is in its way of performance, while its science involves the hidden devices used.

While magicians are usually immaculately costumed for their performances, at times the informal presentation among a few friends may be more effective. When you "produce" a silk handkerchief from a candle flame, for example (see p. 70), no one can say that it came from your sleeve if you wear a sleeveless shirt or your sleeves are rolled up.

All this dates back to ancient times when wonder workers took over most scientific discoveries and used them to delude the populace, a practice still prevailing among the medicine men and witch doctors of primitive tribes.

With the dawn of modern science, the age of marvels ended. People came to realize that there were physical explanations for many of the things that had baffled them. Yet the interest in wonder working increased, but more as a game of wits, instead of an outlet for ignorance and superstition.

Franklin, a Pioneer. One of the first men to realize this was Benjamin Franklin, who presented some of his electrical experiments in the form of tricks. He also quieted the ripples in a stream by waving a cone over it, in the manner of an ancient wizard. The cone contained oil, which dripped out when Franklin lifted his thumb from an air-hole in the handle. That principle is still used in magic.

Another man ahead of his time was the famous French magician, Robert-Houdin, who used electro-magnetism to make light objects seem heavy, before the public generally knew of its existence. Robert-Houdin knew his psychology, too. When he used a mechanical gadget to make a girl apparently float in air, he first pretended to give her ether, which was just coming into medical use, claiming that the new anesthetic lightened the girl's body.

In that way, a scientific discovery was used as a pretext or cover-up for mechanical contrivance. Years later, so-called "mind readers" worked a similar deception, when they latched on to short-wave radio in its infancy, and used it to transmit messages from one person to another, claiming that "telepathy" was actually responsible.

Fakers Always Present. For many years,

fake "mediums" thrived by giving "seances" during which they received "messages" from "spirits," along with other "manifestations." These were simply mechanical tricks, artfully disguised, and helped along by the darkness of the seance room. The famous Houdini exposed many of these frauds during the 1920s, and they have not been as common since then.

However, there is always a trend to flash back to the old days of phony wizardry, and many new fakers are constantly appearing on the scene, some posing as "mental marvels" rather than pretenders to the supernatural. That is a great reason why modern magic, and especially its mechanical side, should be part of every thinking person's education. Knowledge of magic is a safeguard against fraud.

Puzzles Promote Magic. There is a strong link today between tricks and puzzles, many fringing from one category into the other. That has had a strong part in the shaping of the public attitude toward magic, and the desire of many people to make magic their hobby. So many puzzles, stunts, and trick devices have been mass produced and sold through chain stores as well as novelty shops, that the public generally has been exposed to them.

As a result, a person familiar with puzzles may be fooled by a clever trick, but will recognize that he is simply witnessing something done on a larger scale or in a more subtle way. Every year, hundreds of thousands of trick boxes are sold through toy shops and whet the appetites of youthful purchasers toward learning and doing more and better magic.

MAGIC HANDBOOK is specially designed to further the reader's interest in magic by taking him beyond the preliminary stage with which he may be already familiar. For those whose present knowledge of the subject is about nil, simple tricks have been included, requiring very little in the way of special appliances. It is a good plan to learn those first and try them out, even if you already are performing a few tricks of your own.

How to Please Your Audience. In this way, you will find out the type of tricks which you do best, as well as those which please your audiences most. Both of these points are important. Unless a trick is well performed, it will fail to mystify. Even if it does fool people, they can be bored and disinterested if the trick lacks their type of appeal.

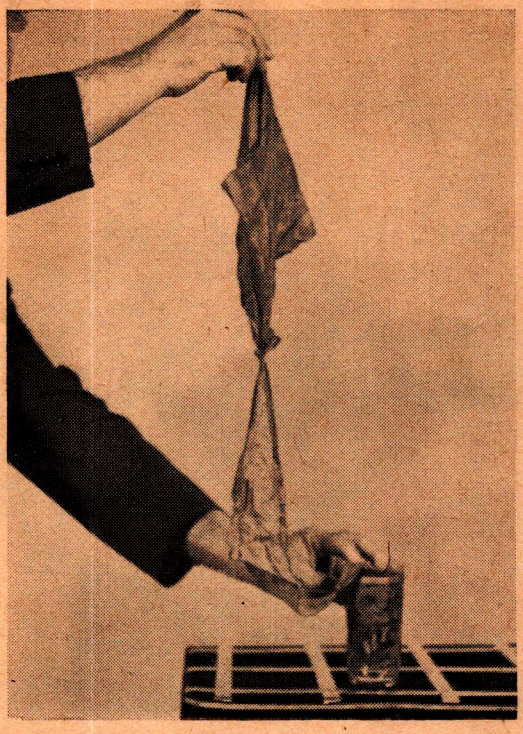
By way of example: If you intend to do card tricks, you should learn to handle a pack of cards smoothly, not clumsily, or people will know that you are not much of a card wizard. But even if you do card tricks well, it is useless to do them for small children or persons unfamiliar with playing cards, because they won't understand them.

The time spent educating them to tell one card from another could be better devoted to tricks of a type that such people would like. About the one exception is the "Rising Card Trick." When done by Thurston, the famous magician, whose method is explained in this book, it appealed to young and old. But the reason was, that the cards themselves did something on their own when they rose from the pack. It wasn't just a case of looking through the pack and finding a chosen card, or naming cards that people remembered.

One of the simplest of sucker tricks uses a prop only as pure bluff. Borrowed cigarette or match is dropped unlit in a glass, covered with a saucer, and soon appears to be smoldering briskly. A few drops of household ammonia were in the glass and a drop or two of hydrochloric acid had been spread secretly with a glass rod on underside of the saucer. Vapors from the liquids combined to form the dense smoke.

Tricks of those latter types are better for audiences of card players. For children, such "sucker" tricks as the "Die Box," or tricks like the "Cake in Hat," are best. One card trick having youthful appeal is the "Card in the Balloon," which like the "Rising Cards" has a surprise ending.

Women like tricks with silk handkerchiefs, or anything colorful, and are apt to go for the spooky or ultra-mysterious. Men like tricks of a challenge type, whether an escape from chains or handcuffs, or penetration like the



Nearly every minute of a successful magic show turns up a new mystery to fascinate the audience. This is the climax of the Flying Handkerchief trick (p. 105) where three firmly tied silks are pulled out of a glass. The rub is that spectators had just seen two tied silks enter the glass; now the third silk has a different color and is tied between them.

"Cabalistic Cube" explained later. But there is no limit to individual interest if the tricks are done effectively and in an entertaining manner. In planning an act, allowance must be made for the various members of the audience. The act must be balanced for that purpose, and suggestions for that are given later.

Ideas Born in the Workshop. All this adds up to the importance of having the right equipment. This means that the modern magician finds his real source of inspiration in the workshop. This MAGIC HANDBOOK is specially designed to suit that need. It shows how common articles and home appliances can be converted to magical use and built into a colorful, entertaining show.

The construction of magical apparatus differs from many workshop projects. There are two sides to every trick: the audience's view and the magician's. The apparatus is governed by those two opposites. A piece of equipment may be outwardly elaborate, but simple inwardly; or just the other way about.

Take contrasting examples: In the "Tube and Ropes," the principal item appears to be the tube. Actually, it can be almost any size, within reasonable limitations, and its decorations are optional. The more ornate, the better, however, the reason being that the tube has nothing special about it, and therefore should be designed to attract attention. The "gimmick"—unseen by the audience—is a mere thumbtack.

Now look at the "Cake in the Hat." Except for a simple jar or "mixing bowl" that can stand any amount of examination, it requires only a borrowed hat and bags or cartons of flour, milk, sugar, and other ingredients. All these can be shown before and after. Yet in the process, the magician utilizes a "fake" device big enough to hold a cake, loading it in and out of the hat according to a set routine.

Challenge for a Craftsman. Equipment like the "Knife Box" featured on the cover, is simple in outward appearance, but requires a special "built-in" device demanding careful workmanship. Yet the outside decorations are important, as the box must not appear too large, yet its dimensions must suit the individual whose head goes inside. This means that most magical equipment must be custom-built, and that proportions may prove more important than specific dimensions.

Some stage illusions vary greatly according to the builders, or the size of the stages on which they are to be worked. To stress this, and to give the reader added data on magical construction, several of the more famous stage illusions are included in the MAGIC HANDBOOK.

Workshop projects are constantly increasing in importance where magic is concerned, because new tricks and devices are being developed with leaps and bounds. In giving repeat engagements, magicians need new items for their acts, and often old tricks are revived for this purpose. Styles change in magic, like everything else, and the net result is a vast backlog of dozens of tricks of all descriptions, an excellent fund from which newcomers to the art can draw.

Some Equipment Remains Standard through the years, and certain smaller items are produced in such quantities that it is more practical to buy them from recognized magical dealers than to try to make them at home. This applies to certain packs of trick cards.

One type, the "Wizard's Pack," consists of cards that have been precision cut, so that they narrow slightly from one end to the other. If a card is taken from this pack, and inserted after the pack has been turned around, its projecting edges enable the magician to strip it out unnoticed. These packs, also known as "Strippers," can be bought at reasonable prices.

The "Svengali Pack," includes 26 short cards, all alike, and therefore is worth the

Audience instinctively ducks to avoid a dousing when magician tosses handkerchief in their direction right after he had covered a glass full of water and picked it up. Surprise No. 1, nobody got wet; No. 2, where did the glass go? (from Vanishing Glass of Water, p. 37).

purchase price, as otherwise the magician would have to buy a lot of extra packs just to make up one. The same applies to various other trick packs listed in most dealers' catalogs and price lists.

Items like "Handkerchief Vanishers," and flesh-colored "Thumb Tips," are also mass-produced, and their purchase is therefore recommended. Tricks depending on precision made appliances, such as close-fitting metal "shells" or devices with clock-work, are often good buys. Some of the magical dealers are continually coming up with new items, and these are often worth the purchase if only for their novelty, as they give the owner the latest tricks that his audiences have not seen before.

Special descriptions come with most of these new tricks, often giving alternate ways of performing them, all of which enhances their value. In the manufacture of magic, like many other products, the names of certain makers have gained deserved reputation over the years.

Magicians Don't Tell. When presenting magic, be careful not to "give away" the working of a trick through careless or incorrect handling. At the end of the act, put away all the apparatus so that no "gimmicks" will be seen. If asked how tricks are done, bluff it off with some kidding answer. In some tricks, of course you may pretend to show how they are done, only to fool your audience at the finish. These tricks are known as the "sucker" type, because the audience bites.

Of course you will have to inform your assistants or workshop helpers regarding the working of various tricks, but keep the secrets from your audiences. Otherwise, the element of surprise and mystery will be lost. Now and then a trick may slip, or some one may catch on, but the magician should always go right into the next trick, and pay no attention.

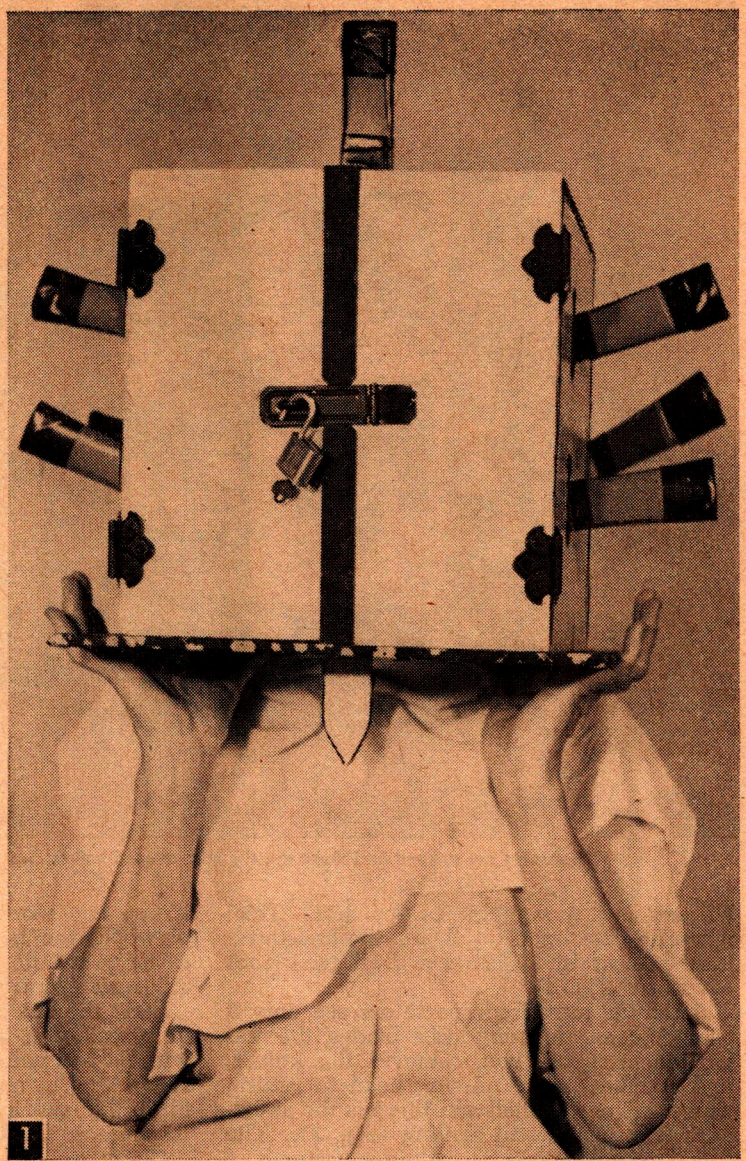
That is why every trick should be carefully rehearsed. Slips will be less likely and when they do happen, the magician's ability to carry on unruffled will make up for it. It is a good plan to have a few tricks in reserve, to run in if any of the others go wrong.

Anyone interested enough to study the magical methods described in MAGIC HANDBOOK and other publications devoted to the explanation of tricks and their construction, will naturally recognize the value of these secrets. This is proven by the fact that interest in magic has increased with the same rapidity as the literature devoted to the subject, and that is growing more and more.

The Decapitation Mystery

Famous Knife Box Illusion

★ **Show your friends how to have fun losing their heads and regaining them while you present this perennial favorite among stage shockers**



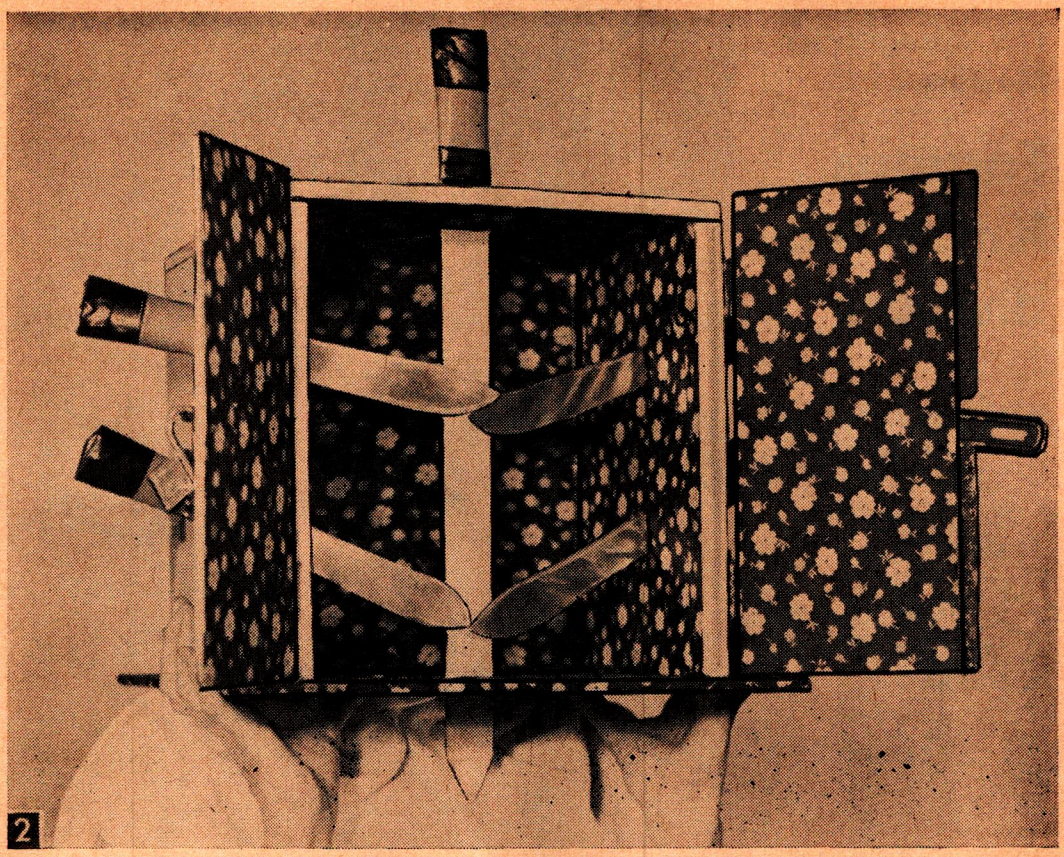
Things look pretty grim for this volunteer. Still, with all those knives driven to the hilt, he does a pretty good job of holding that box.

HERE is one of the most startling of modern magical effects, in which a volunteer from the audience literally loses his head, only to get it back again. In the meantime, he undergoes a few minor discomforts, such as having knife blades thrust through his vanished cranium, but he survives the ordeal as good as ever, and appears as mystified as the onlookers.

All this is done with the aid of a cubical box which has a section of the bottom cut out so that the magician can place it over his assistant's head. When he opens the two front doors, the audience sees the beaming face of the assistant, whose head just about fills the box. But not for long!

The magician closes the doors, tells the assistant to hold tight, and begins the hocus pocus. He takes a large, long, broad-bladed knife and thrusts it down through slits in the top and bottom of the box. The fact that it has penetrated the assistant's head vertically does not perturb the magician. He takes six other knives and pushes them through slots in the sides of the box (Fig. 1), so that they will do the job horizontally as well, if not more so.

The Audience Shrieks in Horror when the magician starts to open the doors. Naturally, they don't want to view the gruesome sight within so the magician, suddenly turning humane, decides to spare them that spectacle.



2

The doors are opened and there are the criss-crossed knives. But the victim's headless.

He makes a few magic passes first. Then when he does open the doors, the assistant's head has vanished, blood and all (see front cover and Fig. 2).

After the surprised spectators see only a criss-cross of gleaming knife blades, the magician closes the box, removes the knives, and commands the missing head to return. The doors are opened and there is the assistant's face again, still smiling (Fig. 3). The box is removed and the volunteer returns to his friends, for better or for worse.

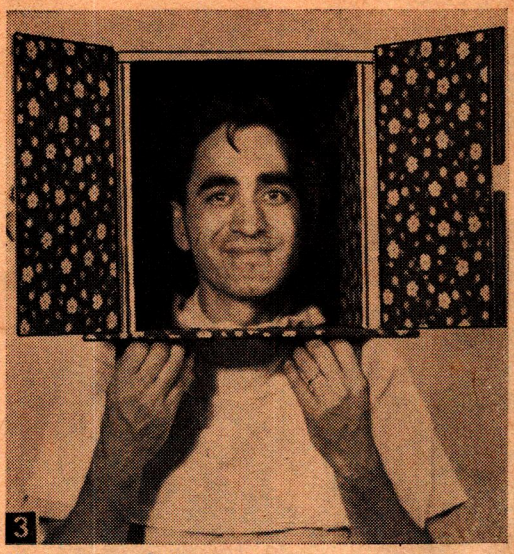
It's All Done with Mirrors, a few short pieces of wood you may already have in your scrap pile, and some odds and ends you may pick up around the house or buy at dime stores. When flat against the sides, the mirrors cannot be seen because they are backed with a cloth to match the interior of the box. When swung out from the sides so that the edges meet at a right angle, they completely hide the head and disguise their own presence with the aid of the inserted knives.

This famous stage illusion is an absorbing workshop project since the shape and general construction of the box are important to its success. It will be easiest to build if you use ½-in. plywood for most of the box. However, if you can work with ¼-in. or even ⅜-in. plywood, the box will be lighter and thus easier to handle. In that case, do not modify any inside dimensions given in the plans.

Start the box by cutting three 11½ x 14½-in. pieces of ½-in. plywood and attach them with 6*d* box nails to form top and sides as in Fig. 4A. Cut another piece of this wood to fill in the back and nail in place. Do not add the base until interior is complete.

Cut three molding strips out of the ¼-in. plywood as in Fig. 4B and install along front inside edges of the box with ⅝-in. tacks. Cut the 5¾ x 12-in. doors from ¼-in. plywood and attach them to front edge of the box flush with the bottom, using 1½-in. butt or decorative cabinet hinges (Fig. 1) intended for ¼-in. stock. Install knobs.

Now you can cut the three knife slots in each side as in Fig. 4A. Use a 3/16-in. drill to start each slit and finish the job with a thin-pointed keyhole saw, the exact length depending on the breadth of the knife blade you intend using. Cut slits so that knives will tend to point slightly downward. The two at the rear should be slanted slightly to the rear as well as downward since they will go behind the victim's neck. Those at front will



3 Meet a new authority on seven ways to part your hair—a little paler, perhaps, but delighted to see daylight again.

be fully shielded from the face. Delay making the top slit until after the mirrors and base are installed.

Mirror Installation. Mirrors are best made from any thin-gage metal sheet chrome-plated one side. Being thinner than ⅛-in. thick glass, this is much easier to conceal. It is also not subject to breakage and is lighter, which simplifies the hanging problem.

Cut the mirrors 7¾ x 11½-in. each, then install them mirror side out to each side of the box as in Fig. 4C, using a 1½ or 2-in. wide black cloth tape such as *Mystic* to act as a continuous hinge along the rear edge. The hinge angle should be 4 in. from the back of the box. Doors should be flush with the bottom and their front edges should fit neatly in back of the side molding strips when doors are swung open.

Decorate the entire box interior, inside of the doors, the tape, and mirror backs with colorful cloth, preferably of mottled or small floral pattern as in Fig. 5. Glue all pieces of the cloth tightly and smoothly in place. If preferred, you can substitute a dark color paint for the cloth interior lining as seen on the MAGIC HANDBOOK cover. Dead black will do the best job. When finished, the mirrors will not be noticed when flat against walls.

Now you are ready to cut the ¼-in. plywood base as in Fig. 5A, modifying the cutout as desired to fit the head of your assistant. Glue a strip of wood beading along angled edges of the cutout to act as a mirror stop. Finish top and side edges of the piece with the same cloth or paint you used before, then attach it to the box with 4*d* box nails, with back edges of each flush and a 1½-in. base extension showing on sides and front (Fig. 5).

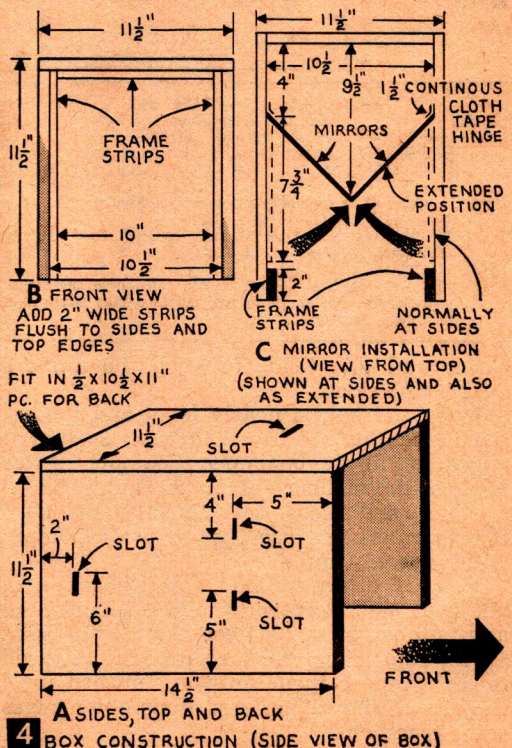
The top and bottom knife slots can now be cut (Fig. 4A). Swing out the mirrors from the walls so their edges meet at a 90° angle in front of the point on the base cutout and against the wood beading. Locate the slots directly in front of the mirror joint and cut them in the same manner as those on the sides. These would normally be 9½ in. from the back of the cabinet.

If you used a cloth lining, cut it at all slots to allow passage of the knives. Side knives should have blades about 7 in. long, but the big center blade must measure 14 or 15 in. so its point will show clearly below the bottom of the box. You can cut "prop" knives from thin sheet metal that will look the part, yet be harmless. Handles can be cut from cardboard and taped in place. If real knives are to be used, *be sure to dull their points.*

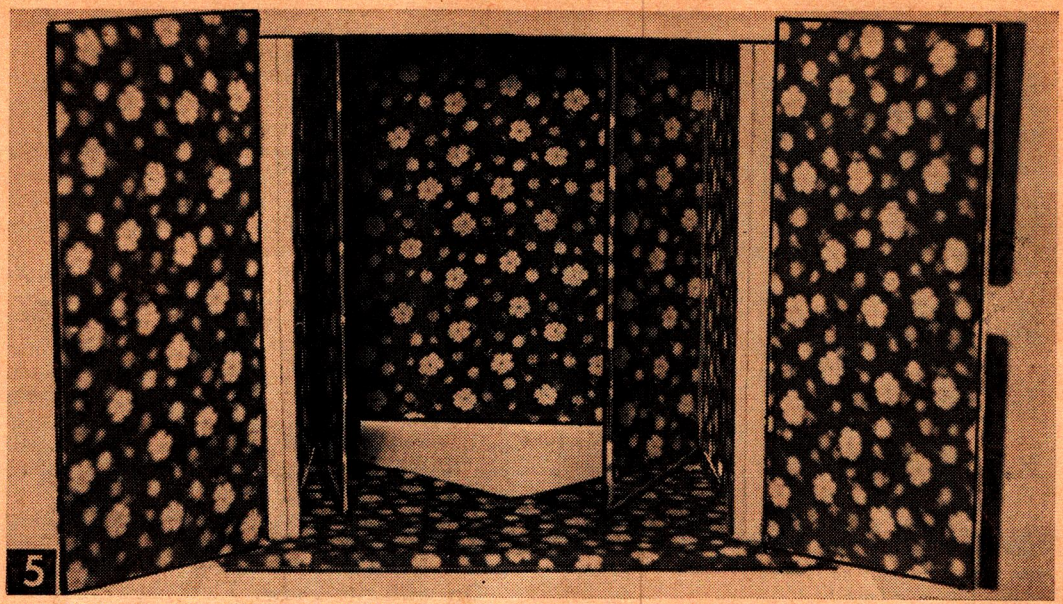
Finish the construction by attaching a hasp and staple to the front doors as in Fig. 1 so that you can keep them shut with a padlock.

On with the Show. First show your audience the box with the doors closed. Mirrors should be flat against the sides; held there if necessary by small, flat catches projecting inward from the front frame. Otherwise, the assistant can hold the mirrors back by extending his thumbs up inside the "collar" of the cut-out base when he is putting the box over his head.

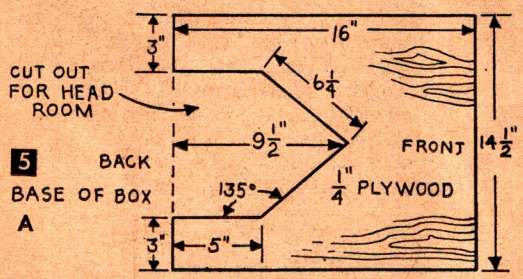
Help your assistant do this by tilting the box forward. He can slide his head into it



4 BOX CONSTRUCTION (SIDE VIEW OF BOX)



Magician's-eye view of the empty knife box, showing opening in base for the head and mirrors swung part way out from sides.



MATERIALS LIST—KNIFE BOX

No. Req.	Size and Description
1 pc.	½ x 24 x 48" plywood (sides, top, back)
1 pc.	¼ x 30 x 36" plywood (base, frame strips, doors)
2 pcs.	7¾ x 11½" thin-gage, chrome-plated metal sheet (mirror doors)
2 prs.	1½-in. butt or cabinet-type hinges (for front doors)
2	decorative knobs (to match hinges)
8 ft.	36"-wide decorative cloth (mottled or small floral pattern) (flat black paint can be substituted)
1 ft.	1½" black cloth tape.
Misc.	glue, wood beading, 4d and 6d box nails, hasp and staple, padlock, sheet metal, cardboard, and tape (the latter three for dummy knives)

easier and this tends to keep the mirrors against the sides.

When the box is nearly level and the assistant has his head well forward so that it appears to fill the box, open the doors. After he faces the audience at various angles, close the doors and release each catch as you do so. If catches are not used, the assistant simply withdraws his thumbs.

Now, by tilting the box slightly backward, and drawing it frontward with his hands, the assistant can bring his head against the back. At the same time, the weight of the released mirrors causes them to swing inward until they reach the "stops" and their outer edges come together.

Push the Big Blade Slowly Down through the top slot, which locks the mirrors in position. Thrust the shorter knives through the front slots in the sides so that they cross in front of the big vertical knife. Push the rear knives into their slots, guiding them against the back wall and behind the assistant's neck.

After pausing for effect, open the doors and show the box "empty" except for the knife blades, as the mirrors reflect the side walls and give what seems a clear view of the back. The broad blades help in this illusion, and if a mirror shows a reflected blade, it is taken to be one of the knives thrust in at the back. Those blades are actually out of sight behind the mirrors, like the assistant's head.

After you have "proven" that the assistant's head is gone, close the doors and remove the blades. Tilt the box forward and the mirrors will again swing back against the walls, where the assistant can press them in place with his thumbs. Open the doors once again and show the assistant with his head back on his shoulders. Then close the doors, and remove the box. When the assistant takes a bow, head and all, advise him not to bow too hard, or his head might drop off.

Presentation Tips. At any time during the presentation, you can look into the box by turning the assistant sideways to the audience. Then, only you can see inside when the doors are opened. You can reach in, show surprise, and say that the assistant's head is no longer there, and that all you feel is blood. This adds suspense and enables you to check the mirrors. After removing the knives, you can look inside again and turn the catches to hold mirrors against the walls.

King of the "Sucker" Tricks—

The Sliding Die Box

★ **The audience will be sure they know the answer—but they'll be wrong!**

by VICTOR D. DRESSNER

The die is returned—visibly—to the box; of course, something (the solid die) is left behind. This is not an audience view!

THIS is the most famous of all the "sucker" tricks—a term applied to those where the onlookers are coaxed into thinking that they know "how it is done," only to be fooled at the climax. It is a sure-fire number in any magic show; you will find it a particular favorite with juvenile audiences.

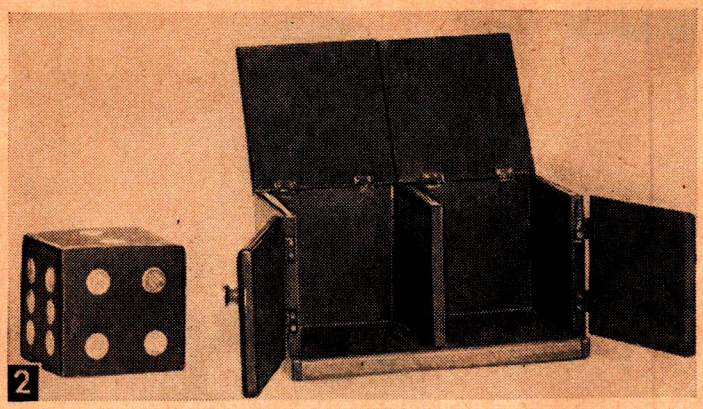
The Effect. The magician shows an oblong box consisting of two compartments, side by side; it has four doors, two in front and two on top. The doors are opened, and the magician shows a spotted cube—like one of a pair of dice—which he places in a compartment of the box. He closes the doors, tilts the box so the die slides back and forth from side to side, the audience hearing it go.

Next the magician shows an empty hat, which he sets, brim up, on a table. He says that he can make the die pass from the box to the hat, sending it either visibly or invisibly, as the audience may choose. The spectators say, "Visibly," so the magician opens the box, takes the die out, and places it in the hat. He then makes it return visibly by taking it out of the hat and putting it back into the box, closing the doors again.

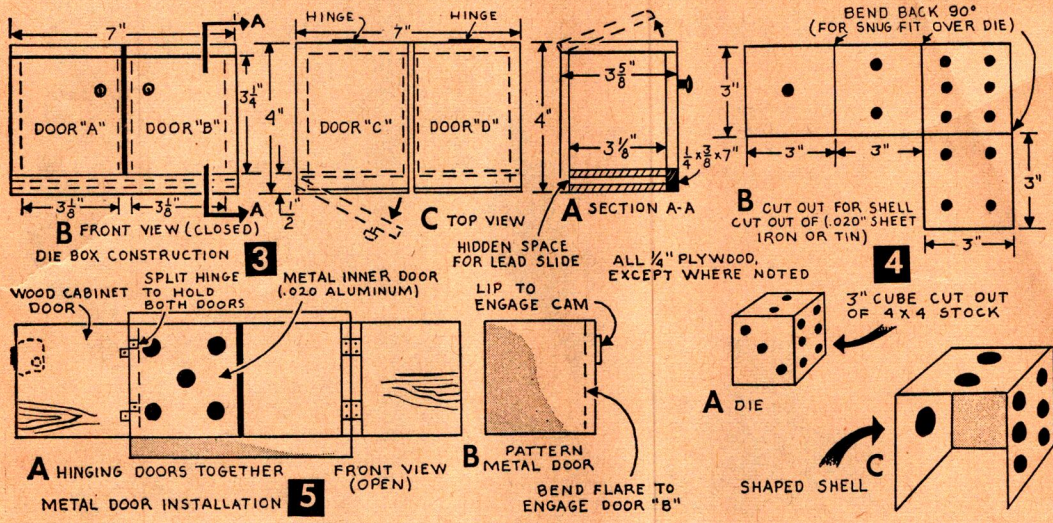
Noting that the audience is disappointed, the magician says that he will resort to the invisible method. He tilts the box to the left and opens the doors on the right, showing that the die is gone. He closes those doors, tilts the box to the right, and opens the doors on the left. The audience hears the die slide back and forth, and finally someone demands, "Open all doors at once!"

So the magician opens all four doors. The box proves to be entirely empty. He then reaches into the hat and brings out the solid die, which somehow traveled there invisibly.

Requirements for the Trick. The box has two compartments (Fig. 2), as stated, each with a front and a top door, and with a divid-



The box itself: innocent enough —and with a solid partition in the middle.



ing partition between them. Construct it of ¼-in. mahogany plywood, assembling it with glue and brads. Overall length is 7 in., overall width 3⅝ in., overall height 3⅞ in. (Fig. 3). Paint the inside of the box black.

Make a double bottom on the box, of ⅛-in. plywood, with a ⅛-in. space extending the full length of the box (Fig. 3A). Insert in this space a flat piece of lead; it will slide freely back and forth when the box is tilted and give the impression to the ear of the die sliding back and forth.

Hang the doors with wrought brass ½-in. butt hinges and ¼-in. *fh* wood screws. Front doors are 3¼ in. high by just short of 3½ in. wide; they are hinged at the ends of the box, and open at the center (Fig. 3B). The top doors are 3½ in. x (just short of) 3½ in.; they are hinged at the back of the box (Fig. 3A and C).

Also required is a 3-in. wooden cube, or die (Fig. 4A), and a metal shell, made to fit snugly over the die (Fig. 4B and C). The shell is made of sheet iron or tin about .02 in. thick, and has four faces, for sides 1, 2, 4, and 6, with sides 3 and 5 left open.

Paint the shell black inside and out, and also the die. Punch ½-in. diameter spots from white or gold paper. They are glued to both shell and die (Fig. 4), so that the shell can be shown separately and appear to be the solid die.

Performance. Insert the shell and the die in the box beforehand, setting the shell so that its two open sides correspond with the top and front of the compartment in which it is placed.

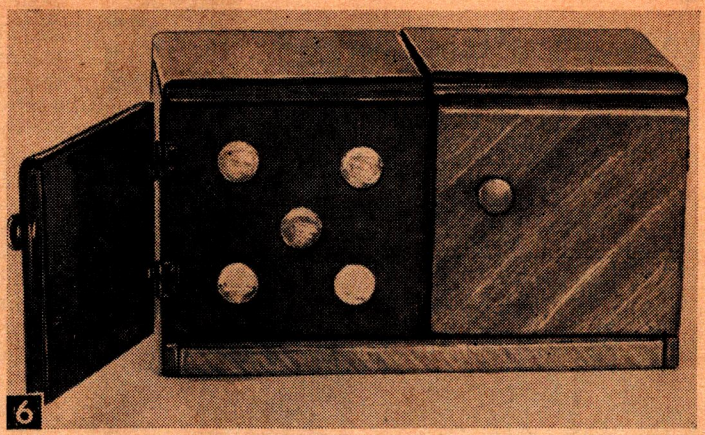
Show the die, proving that it is solid, and put it back into the compartment that contains the shell. Take care to have the 5 side of the die at the front, the 3 side on top.

Close the doors, and tilt the box back and forth; the members of your audience will be sure that they can hear the die sliding. What they actually hear, of course, is the lead weight sliding in the double bottom. After deciding to pass the die "visibly" into the hat, open the side where the die is, and remove die and shell together, as if they were one. This is the "die" which you place in the hat, turning it so that the open sides of the shell are downward and at the back.

—SLIDING DIE BOX

Description
' plywood (box sides)
lywood (base, trim)
ood (die, cut from

2" aluminum (shell,
door
x 1" brass (cam on door)
' brass butt hinges for ¼"
ock
llow weight for base; 2 miniature doorknobs; colored paper for die spots on die, shell, fake door; glue, brads, ¼" fh wood screws, dead black paint, varnish



The leaf door in place. The die is soon to be magically transported to the waiting hat.

When you return the die "visibly" to the box, bring out the shell, leaving the real die in the hat (Fig. 1). At this point, you are holding the box in your other hand; turn it so the back is toward the audience and the front doors are slightly downward. When you start to put the shell into the box, the audience should see the 4 side facing them, and the 2 side should be on top. Tip the 2 side toward them, so it goes against the inside back of the box (Fig. 4C), leaving the front and top open. Close the doors and turn the box around, with its front doors toward the audience.

Tilt the box and pretend to slide the die back and forth, showing one side empty, then the other. When the side containing the shell is opened the shell is not apparent, as it has no front or top.

The hidden weight accounts for the sliding sound, and when all four doors are opened, the box appears to be completely empty. Then take the real die from the hat.

Variations. Though a well-tested trick, the die box has two weaknesses: 1) the die does not actually slide from side to side because the fixed partition is needed to help hide the shell; 2) the die cannot be shown in the box up to the finish. These drawbacks can be overcome by adding a thin metal door to the rear of the front door of the compartment on the left.

Alter the hinges of the door by cutting them in two (Fig. 5A). This facilitates hanging a second door, a "leaf" door, from the same hinges. Make this inner door of aluminum about .02 in. thick. Rivet the half-hinges to the leaf door.

Bend, or flare, the edge of the leaf door that is farthest from the hinge (Fig. 5B). Adjust this flare so that it fits tightly against the door on the right; thus, there will be enough friction to keep the leaf door closed when you don't want it open.

Provide the knob of the left-hand door with a brass cam (Fig. 5A). To insert the cam, first remove the inside laminations of the wood (carefully, so that it can be neatly replaced). Cut a recess in the center lamination of the door to make room for the cam. Peen and solder the cam to the shaft of the door knob.

On the leaf door, adjacent to the cam, provide a lip which can be engaged by the cam when the knob is turned (Fig. 5B). This makes it possible to open and close the wooden and leaf doors together or the wooden door separately. After you have finally adjusted the cam so that the doors operate properly, replace the lamination that you removed, or patch the door with a similar piece of wood.

Paint the front of the leaf door black and decorate it with five spots to represent the 5 side of a die. Paint the back of the leaf door solid black to match the inside of the real door.

Presentation. With the leaf door installed, when you take the shell die from the hat, place it in the compartment on the right while the back of the box is toward the audience. Close all doors and turn the front toward the audience. Tilt the box so that the weight slides in the bottom space, thus conveying the idea that the die is in the other section, on the left.

Open the left-hand door with the knob turned so that the leaf door shows (Fig. 6), giving the impression that the die is there. Open the right-hand section to show that it is empty. Close the doors and tilt the box the other way, then open the left-hand door again, carrying with it the leaf door, and show that that section is now empty.

After carrying on this operation a few times, open all doors and show the box. The left front door carries the inner door with it; the shell is in the other compartment, but cannot be seen. The die has indeed been transferred (invisibly) to the hat. Prove it by taking the solid die from the hat and showing it to your astounded audience.

Wrist Chopper

★ **Build an up-to-date version of this famous old spine-tingler which removes the danger element and adds to the suspense**

Pretty victim wears expression of serious doubt as the magician maliciously forces the chopper down, down, down—

GUILLOTINE tricks which anything from a finger perennial favorites at ma one of the most effective is the

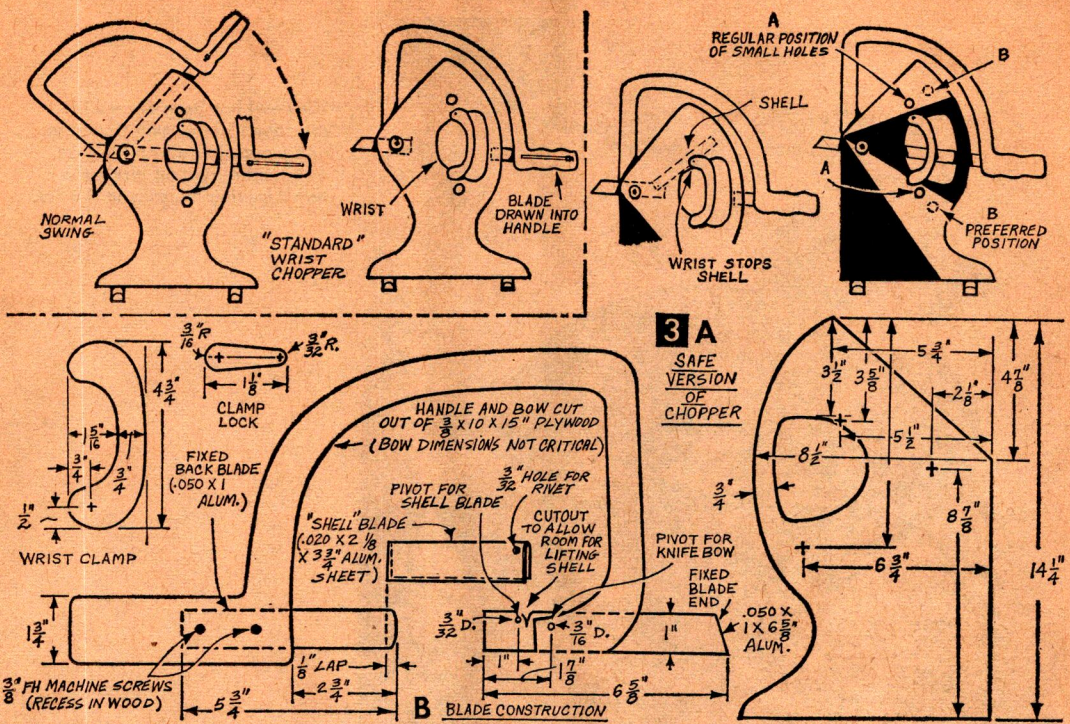
The magician places a potato i for a test and slices it in half. Th of his assistant or that of a voluntee in place and you can actually "see" going down through the wrist. As pr knife is cutting, carrots stuck in small above and below the wrist are sliced thro neatly. But some strange power saves t victim. He never feels the knife and finds his wrist just as firm as ever after the ordeal is ended. The mystery deepens after he is freed and the knife is again drawn up and down past the wrist hole.

A Clever Secret kept from the audience is the fact that a part of the visible portion of the blade can be pulled back by a metal slide catch fitted in a slot on the back side of the handle. As the operator stands with knife poised over the wrist, the thumb of his right hand is in perfectly natural position to slide the knife back unnoticed.

Actually the knife slides back about 3 in. to a point where the edge is still hidden by the little wood clamps that "lock" the wrist in position. More subtle purposes of the clamps are to hold the wrist just out of harm's way when the knife is withdrawn and close up all area around the wrist.

There is little danger when this standard

Handle and back ends of knife are fixed in combination handle-bow cut from one piece of plywood. Center blade section is a non-sharp aluminum shell which hinges upward upon light contact with a wrist, falls back in place as handle is returned upward. Wrist should be pulled through to fill hole, preventing view of moving shell.



trick is performed by an experienced magician or a new recruit who will always remember to withdraw the blade as far back as it will come *before* pulling down the knife. However, there is some chance of embarrassment if the performer forgets to return the blade before passing it back through the wrist hole area.

The Safer, More Suspenseful Version shown in Figs. 1 and 2 is a fairly simple workshop job made up of plywood and aluminum sheet as in Fig. 3A. It is accident-proof because there's nothing to remember to do. Yet it's more thrilling for the volunteer, because he can actually feel the "blade" on his wrist as the knife goes on down—a real surprise.

In this modification, the knife blade is held the same way in a plywood bow, except that both ends of the blade are fixed, while a third center section is hinged to the end blade as in Fig. 3B. The fixed portions will handle just as effectively and be much easier to prepare if you cut them out of sheet aluminum. They needn't be sharp, as no carrot-cutting hole is used in this design. However, the lower hole is retained to show the portion of the blade that swings below the wrist.

The third section or "shell" blade is actually a piece of thin-gage aluminum about 2⅛ in. wide and 3¾ in. long. Fold it over lengthwise, just a trifle past the center mark, so that when the ends nearly touch, one will be slightly lower than the other. Do not pinch the folded end since this will rest on ends of the fixed blade sections. Install it with lowest part facing the audience side so that only a single edge will be seen.

Attach to the blade end as in Fig. 3B with a rivet. You could also drill a 3/32-in. hole at the point marked, push a 6*d* box nail through, cut the other end off 1/16 in. from the shell, and hammer down the cut end to form a rivet. This joint will always be hidden by the chopper frame. Be sure to cut out a section of the metal in the blade end just beyond the rivet, to prevent binding when the blade is brought down on a wrist, the shell should hinge upward, maintaining wrist contact.

Downward movement of the blade should be stopped by a peg when blade reaches level of the bottom of the wrist. This is to prevent the shell from falling in place below the wrist. Return blade to the upper position before releasing the victim and the shell will fall back in place. Whenever it is moved through the empty wrist area, it will appear as a really vicious-looking knife.

MATERIALS LIST—WRIST CHOPPER

No. Req.	Size and Description
1 pc.	¼ x 15 x 24" plywood (outer layers of stand, clamps)
1 pc.	⅜ x 12 x 24" plywood (center layer of stand, combination handle-bow)
2 pcs.	¾ x 1 x 6" scrap wood (stand supports)
1 pc.	.050 x 6⅝" bright aluminum (blade end)
1 pc.	.050 x 1 x 5¾" bright aluminum (back blade)
1 pc.	.020 x 2⅛ x 3¾" bright aluminum (shell blade)
1	1¼" *rh* machine screw with nut and wide washer (bow-handle pivot)
2	3/8" *fh* machine screws with nuts (handle)
2	#8 x 1½" *fh* wood screws (stand supports)
2	¼ x 1" copper or brass strips (clamp locks)
Misc.	rivets, ¾" box nails, glue, paint

1

The bowl has been dipped in someone's brand new Homburg and jammed down on the fake, which is brought up inside the bowl, leaving the cake in the hat.

It's fun to bake

A Cake in a Hat

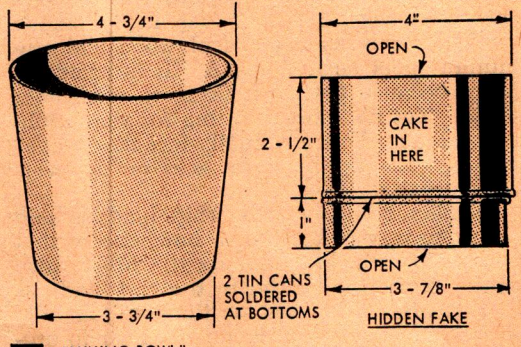
★ Using a borrowed hat for a pan, you can produce a perfect cake

THIS hilarious bit of wizardry is always popular, particularly among the younger members of the audience. Adults enjoy it, too, however, as it makes many of them think back to the time that they first saw such a wonder performed by a magician.

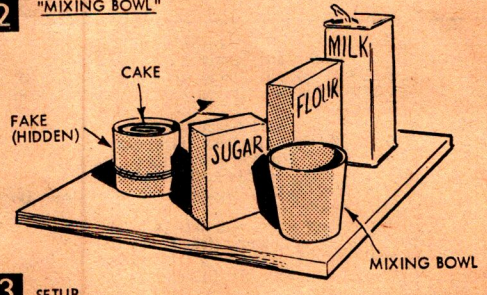
On the magician's table are various ingredients needed for baking a cake: flour, milk, eggs, baking powder, various flavorings, and, of course, a mixing bowl. All that is lacking is a cake pan. So he borrows a hat.

Something Is Bound to Happen when a magician borrows a hat. In this case, he decides to use the hat as a cake pan. He sets it on the table with the rest of the items, moving them to make room, then turns the hat over so that the brim is upward.

Next, he pours milk into the mixing bowl, and adds a few eggs. These he dumps into the "cake pan." He adds more ingredients, some directly into the hat—a little sugar, a little salt, etc. He puts flour into the mixing bowl, then into the hat—oops! the cake pan.



2 "MIXING BOWL"



3 SETUP

4

The ingredients are placed at the front of the table and serve as a screen to hide the fake. They need not necessarily be on a tray. Here the hat is being placed over the fake. The audience is to the right of the picture.

The magician taps all the remnants of the mixture into the hat, before he realizes what a mess he has made. Then, apologetically, he holds his cake pan over a candle flame or above a glowing flashlight, to bake the cake as well as he can.

He does very well. When he turns the hat toward the audience, out comes a cake, which he serves to the spectators. The hat is returned to its owner, none the worse for wear: no eggs, no milk, no flour—those are all in the cake, and the hat is undamaged.

Some Special Equipment is Needed, which, appropriately enough, can be made from common kitchen items. Your mixing bowl is a plastic refrigerator container 4½ in. high, with a top diameter of 4¾ in. and a bottom diameter of 3¾ in. This container should not be transparent: if the one you have is transparent, give it an outer coating of aluminum paint.

You also need a "fake" which is never seen by the audience, as in Fig. 2. This is made from two tin cans, one 2½ in. high and 4 in. in diameter, the other 1 in. high and 3⅞ in. in diameter. Although these dimensions were taken from actual tin cans, the sizes may vary, as long as the cans serve their purpose.

Remove the tops from the cans, invert the shallow one, and place the deeper one on top so that the two cans are bottom to bottom. Fix them firmly together with solder or some other suitable adhesive. The result is a cylinder with a deep upper compartment and a shallow bottom one.

Place a jelly roll or similar size cake in the top compartment of the fake. It should fit loosely and have paper around it. Set the fake at the back of the table, allowing it to extend slightly over the edge. Hide it behind the various cans, cartons, and other articles (Fig. 3); leave plenty of space behind these articles, as the hat is to be placed at the back of the table.

In Presenting the Trick, call attention to the various articles on the table. Then borrow a felt hat, push out the crown to make it bowl-shaped, and remark that it will do for a cake pan. Approach the table and start to move the articles forward to make room for the hat. In so doing, set the hat, crown upward, over the fake, completely hiding it (Fig. 4).

Move the articles out of the way, lift the hat, and tilt it forward—crown first—until the brim is uppermost. Lift the fake along with the hat in such a way that the fake turns over in the hat (Fig. 5). The deeper compartment containing the cake will then be down. This loading of the fake is so natural that no one suspects it. Apparently the magician has simply turned the hat brim upward.

Now comes all the comedy of mixing ingredients and pouring them into the hat. Actually you pour them into the shallow compartment of the fake, which is now uppermost (Fig. 6). Take care, or otherwise they will spill. One egg, a little flour and milk, a few dashes of salt and sugar are all that need go

MATERIALS LIST—CAKE IN HAT

No. Req.	Size and Description
1	hat borrowed at performance (Homburg preferred)
1	plastic refrigerator container 4½" high x 4¾" top dia. x 3¾" bottom dia. (mixing bowl)
2	tin cans, one 2½" high x 4" dia., one 1" high x 3⅞" dia. (fake)
1	jelly roll or other small cake
1	candle or flashlight (cooking flame)
Misc.	flour, milk, eggs, baking powder, sugar, salt, spices, flavorings

5

The magician tilts the hat forward toward the audience, lifting the fake with it and bringing the shallow end of the fake upward. This is a side view.

6

Front downshot view. The magician has mixed some ingredients by taking them from the stand and stirring them in the bowl. Now he is putting the mixture in the open end of the fake. The next step will be to dip the bowl mouth downward into the hat, as though to pour the last drops.

in, as these are enough to put the audience in hysterics, because of what they think is happening to someone's hat.

The Best Part Comes Last. You look into the mixing bowl and decide that you should pour every last drop from it. You invert it over the hat and dip it right down in. In so doing, press the plastic container down over the fake so that its tapering walls grip the upper edge of the fake (Fig. 1). Lift out the container, fake and all, turning the mouth away from the audience (Fig. 1), while you peer into the hat and nod wisely. All that is left in the hat is the cake, which remained when you lifted the fake out. Set the container on its side, so that the fake is unseen by the audience, or place it upside down on a chair or another table.

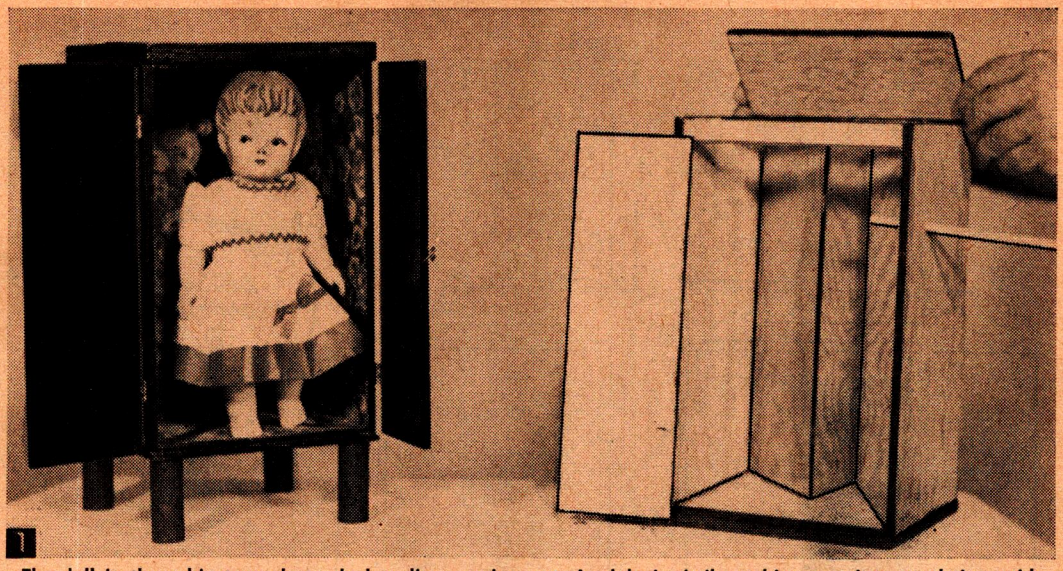
Now give your full attention to the hat. Pretend to cook the ingredients over a candle flame or a glowing flashlight. Finally, walk forward, and bring out the cake, immediately showing the inside of the hat to prove that it contains nothing else. You may serve the cake to your audience, if you like.

There are many touches that may be added. You can pretend to shake sugar, salt, spices into the hat in great quantities, simply using dummy shakers. You can dip spoons into bags and boxes, and then pretend to dump their contents into the hat, although they are practically empty. Some of the ingredients must of course go in, but it should be kept at a minimum to prevent spilling from the shallow compartment. Experiment and practice will help to determine the proper amounts.

A can with greater depth may be used for receiving the ingredients, but in that case you will have to be more careful in removing the fake, or you will need a deeper plastic container. The ideal arrangement is to have the container just about large enough to go to the bottom of the hat when picking up the fake.

Record Lights Tube

• This is a stunt for a dry winter's night. Two phonograph records are placed on a table, and while you are out of the room a friend rubs one on his sleeve. When you return, you can tell instantly which one has been rubbed, by means of a fluorescent tube. Darken the room and move the tube near the two records. It will light up when held over the record that has been rubbed.



1

The doll in the cabinet, ready to do her disappearing act. At right is similar cabinet nearing completion, with lid being installed and mirrors already in place for test.

The riddle of

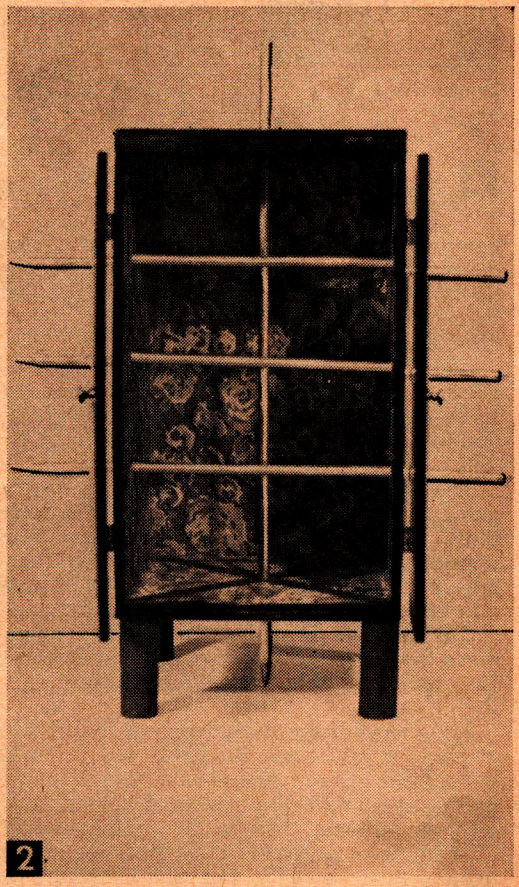
The Egyptian Torture Cabinet

★ **Insert the spikes, and the doll disappears; withdraw them, and it reappears—Build this startling stage illusion in miniature**

SIMPLE in construction but startling in performance, this spike cabinet can be made doll-size or large enough to contain a living girl. For purposes of economy and portability, the smaller version is recommended.

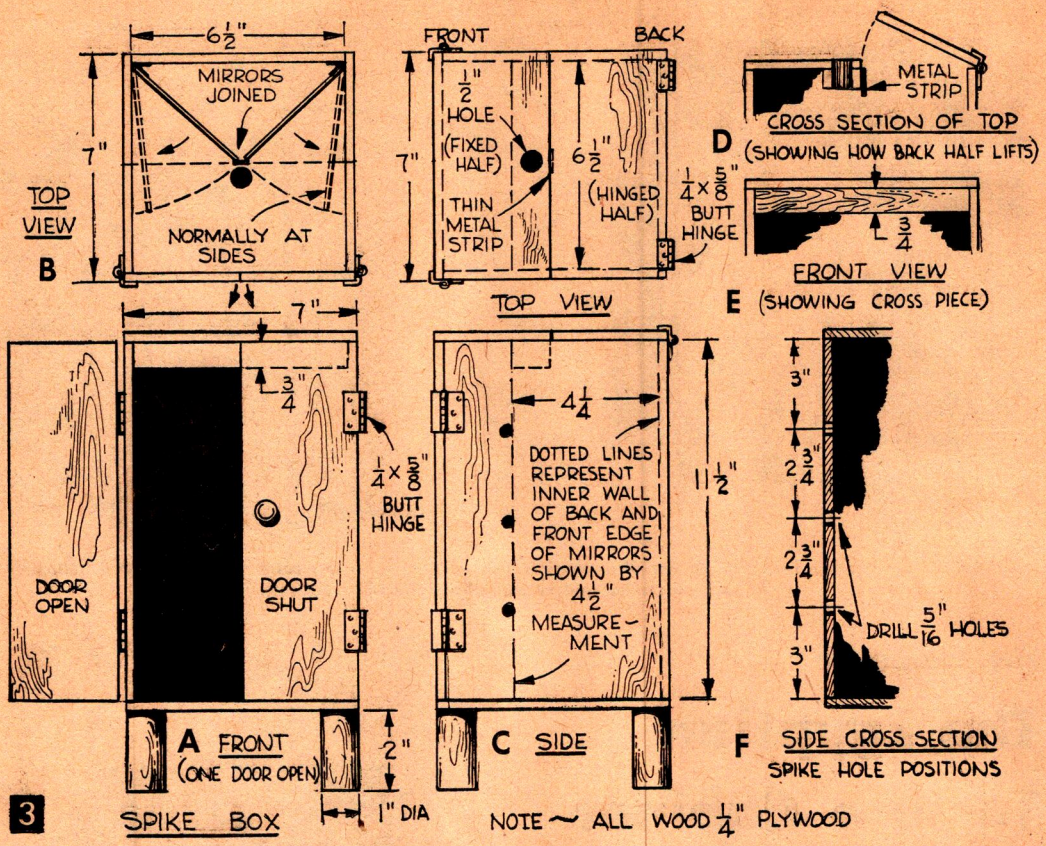
The Riddle. The magician shows a toy doll almost as tall as the cabinet and places it inside (Fig. 1). He closes the doors, shows the cabinet from all sides, and displays some thin pointed spikes, long enough to go completely through the cabinet. He pushes one straight down through the cabinet from top to bottom, then three more crosswise—in one side and out the other.

The rear half of the top is hinged, so the magician can reach inside the box after the doors are closed and guide the spikes. Observers soon decide that the doll is merely



2

Spikes penetrate the box, and the doll has not only avoided them, but has completely disappeared.



hemmed in by the spikes, but the magician maintains that the doll is gone. To settle the question, he opens the doors. The doll has vanished, and only the spikes are visible (Fig. 2)!

The magician shows the cabinet from all sides, then closes the doors and removes the spikes. When he again opens the cabinet, the doll is back inside; he demonstrates that the doll is solid.

The Cabinet Is an Upright Box 7 in. square and 1 ft. high. Its front consists of two doors that open outward. You can mount it on four cylindrical legs each of 1 in. dia. and about 2 in. high. Empty spools make good legs, or you can cut them out of 1-in. doweling.

Cut the sides, back, bottom, doors, and two-piece top out of ¼-in. plywood (see Materials List) and assemble with glue and brads as in Fig. 3.

The secret of the trick depends upon a pair of mirrors, which are hinged to the inside of the cabinet at the rear corners. These mirror doors should be 4½ in. wide and 11¼ in. high, or ¼ in. shorter than inside cabinet height.

In normal position, they will stand flat against the side walls and will be unnoticed if finished in the same manner as the rest of the cabinet interior. When the trick is to be performed, they will swing inward about 45° so that their front edges meet in a near right angle at about the center point of the cabinet.

To hinge the mirrors, stand them in position against the sides and cut a strip of 1-in.-wide plastic tape to equal the long dimension of each. Now attach the strips, half the width on the edge of the mirrors and half against the back of the box next to corners, so that they will act as continuous hinges.

When mirrors are in place, glue and brad a ⅞-in.-wide strip of plywood to the underside of the fixed half of the box top as in Fig. 3C and D so that its rear edge will just clear mirrors at point where their edges join. This brace should approximately align with the rear edge of the fixed top piece but may protrude a bit to the rear. On its edge, and directly in front of the point where the mirrors join, install a thin ¼ x ⅜-in. strip of metal with a single small brad driven through the center. This will act as a stop to hold mirrors in place, but is so small that it will not be seen.

After mirrors, top cross brace, and metal stop have been placed, drill a ½-in. dia. hole through top and brace as in Fig. 3B just in front of where the mirrors meet. Drill a similar hole in a corresponding spot through the base. A vertical spike thrust down through

MATERIALS LIST—TORTURE CABINET

No. Req.	Size and Description
2 pcs.	¼ x 6¾ x 11½" plywood (sides)
1 pc.	¼ x 6½ x 11½" plywood (back)
2 pcs.	¼ x 3½ x 11½" plywood (doors)
1 pc.	¼ x 7 x 7" plywood (bottom)
2 pcs.	¼ x 3½ x 7" plywood (top)
1 pc.	¼ x ⅞ x 6½" plywood (top cross-brace)
1 pc.	¼ x ¾ x 6½" (front crosspiece)
4 pcs.	1" dia. x 2" dowel, or spools (legs)
1 pc.	½" dia. x 16" dowel (top spike)
3 pcs.	¼" dia. x 12" dowel (side spikes)
3 pr.	¼ x ⅝" butt hinges for ¼" stock, with screws
2	4½ x 11¼" metal or glass mirrors
1 sq. yd.	cloth with mixed or variegated pattern (lining)
1	doll less than 11" tall
Misc.	2 miniature metal or wooden knobs, glue, 1" brads or #4 x ¾" fh screws, black (or other color) paint, aluminum paint, tape for floor, plastic tape for mirrors, strip scrap metal

these holes will hide the edges of the mirrors. If close enough, it will also keep the mirrors joined and take over the job of the metal strip.

Now cover the entire cabinet interior with colored paper or wallpaper of a mix or variegated pattern. Also use it to cover the backs of the mirrors and tape hinges. When the mirrors are swung outward the cabinet will appear to be empty, as the reflection of side walls appears to be the back (Fig. 2).

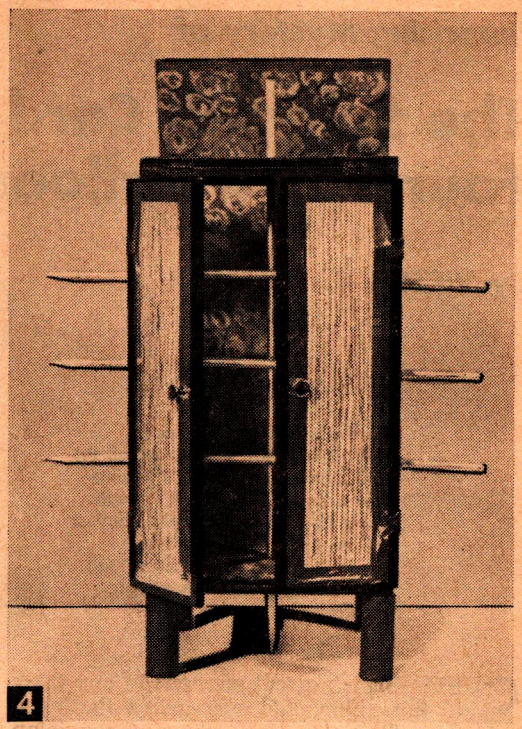
Drill three ¼-in. dia. holes in each side of the cabinet, at 2¾-in. intervals from top to bottom as in Fig. 3F. Align them so they will just clear front edges of the mirrors when they are against the walls.

Spikes to be pushed through the side holes should be of ¼-in. dowel and about 12 in. long; the top spike is a ½-in. dowel 16 in. long. Touch them up with aluminum paint. Metal spikes may be used, if preferred.

Presenting the Trick. Make sure the mirrors are pressed along the sides, so the box can be shown as unmistakably empty. Put the doll in the cabinet, close the doors, and start pushing spikes through the side of the cabinet. To guide them through, lift the hinged half of the top (Fig. 3B), and reach down inside. This covers the action of swinging the mirrors out from the walls and bringing their front edges together. Move the little metal tab down and push the long spike down through, holding them in place. Close the hinged part of the top, open the doors, and the doll has vanished.

To bring back the doll, close the doors and reverse the action, pressing the mirrors against the sides. This can be done with little fuss inside the cabinet, since the mirrors do not have to be adjusted.

If the mirror edges show when the mirrors are flat against the sides—as is quite likely if glass mirrors are used instead of metal—install two strips of ¼-in. plywood, 11½ in. high and 2 in. wide, one at each side of the cabinet, flush with the front. These will give the walls a double thickness as far back as



4

Doll has been moved to rear of cabinet, mirrors placed and spikes inserted. Doors have been partly opened to show how opening the top will facilitate handling. In action, top should be closed before opening doors.

the mirrors and will hide the mirror edges. An X-shaped pattern of tape should be formed on the floor of the cabinet, to mask the bottom edges of the mirrors when they are out from the walls.

Variations. As a full-sized stage illusion, with a living girl, the cabinet should be built so that approximately 25% of the interior serves for concealment. In such cabinets, straps are attached to the mirrors, so that the girl can pull them into position.

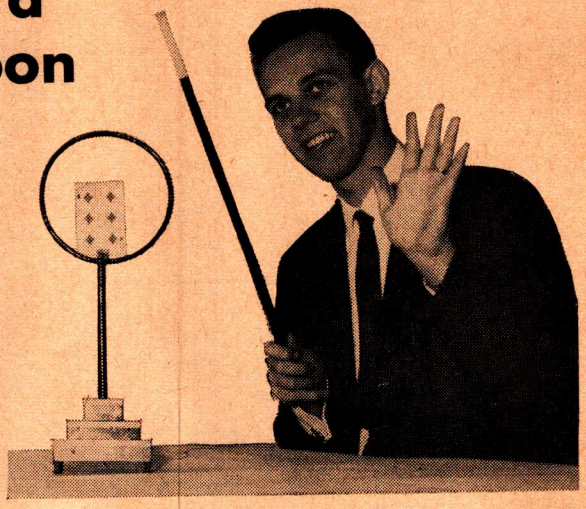
Additional spikes can be used, so that some can be pushed through holes in the sides and out the front. Short spikes can be pushed in holes at the back, following the angles of the mirrors going past the doll's neck and legs. Any extending from the front must be drawn back to open the doors, but their points will still be seen.

A large array of spikes makes a good effect, and any that are reflected by the mirrors simply appear to be some of those that were pushed through from the back. But all this takes considerable time, and slows the performance.

Surprising Mystery of

The Selected Card Found in a Balloon

By VICTOR D. DRESSNER



Card stands big as life inside ring as if it had been there all the time. Magician sparks lightning-fast action by moving his magic wand in a natural manner. Against a dark background, audience cannot see the fine black thread that connects wand to trigger release.

SURPRISE is a great element in any trick and this rule holds even when finding a selected card. But when a magician causes a card to disappear from a small box and, seconds later, it pops up inside a bursting balloon (Figs. 1 and 2) he will really astound his audience.

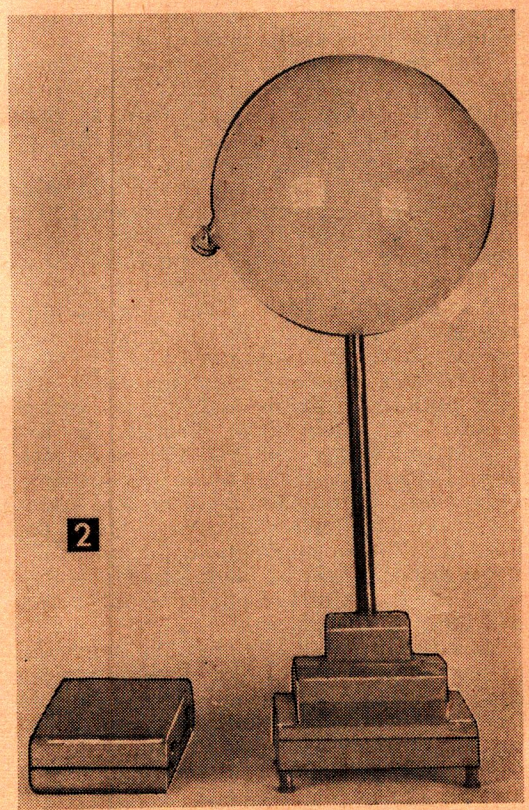
Such a project calls for some workshop skill, but when you have finished, you'll have a trick that younger audiences will never tire of watching.

Among props needed is a deck of "forcing" cards containing from 20 to 30 all-alike cards in the center of the deck so that when it is spread face down, a person will normally take one from that group. A special type of forcing pack known as the Svengali Deck is available at magic supply houses for $1. It is better than the old-style forcing pack as it can be handled more freely.

You'll want a small wooden box large enough to contain a pack of cards, although used to vanish the selected card. Since the box should appear the same whether in normal or an inverted position, it will be easiest to assemble as a one-piece box, then saw it lengthwise in half to make base and cover exactly alike. You can cut the top, base, and sides out of ¼-in. plywood and assemble as in Fig. 3. Glue and assemble the pieces, then clamp until dry.

The saw cut will reduce overall thickness of the box but that is not critical. It's more important that the cut halves appear as identical twins. Round off all top outside edges, then sand smooth and apply shellac or varnish to the exterior.

The box should be fitted with a flap as in



Stand at start of trick. Balloon is inflated slightly larger than ring diameter to remain firmly in place.

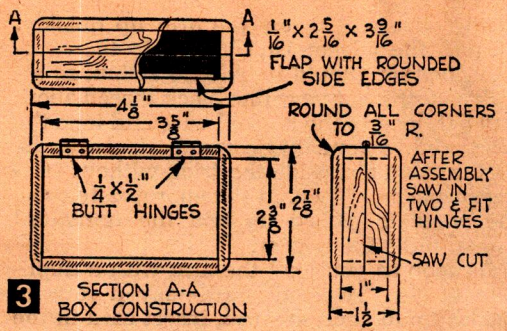
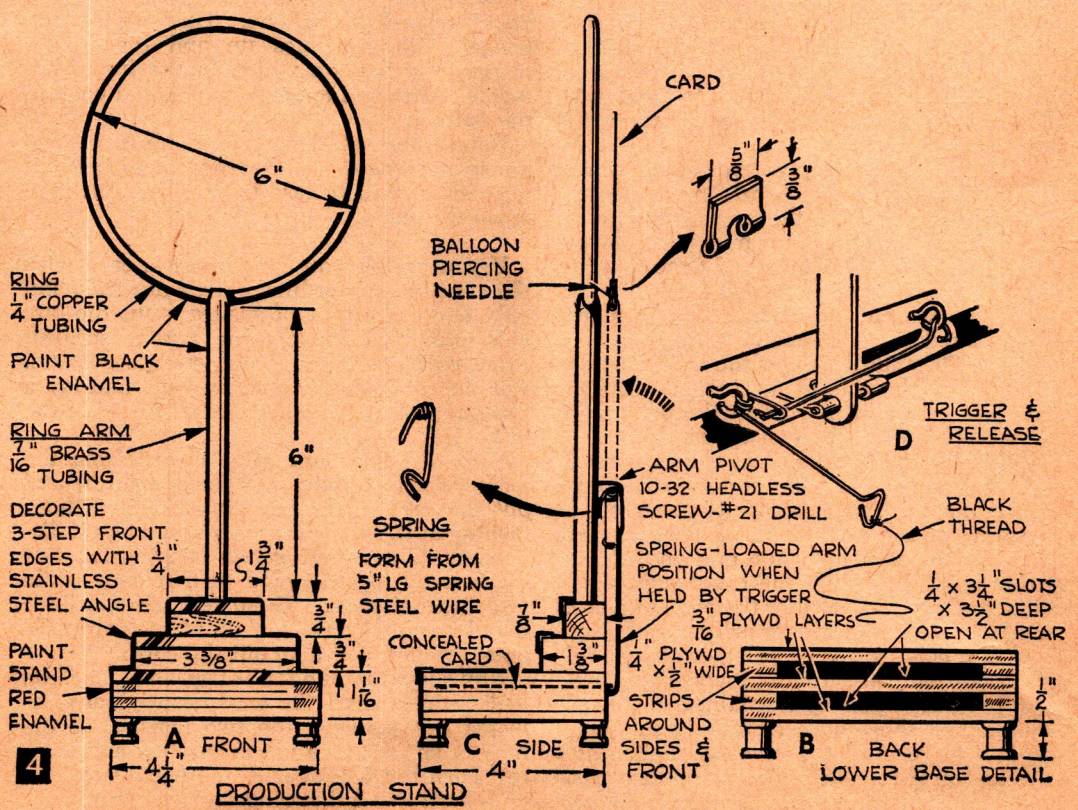


Fig. 3, with length and width cut 1/16 in. shorter than inside box dimensions. This can be made of a thin sheet of wood, such as the balsa obtained at hobby stores, or stiff cardboard, preferably no more than 1/16 in. thick. Metal can be used but may make a telltale noise when you turn over the box. Now paint the entire flap and the interior of the box with one coat of flat black paint. Attach the box halves with 1/4 x 1/2-in. brass butt hinges, using 1/4-in. brass escutcheon pins.

Your Skill as a Craftsman is needed to make the production stand right. The audience sees this as a metal ring stand on a wood base to hold the balloon (Figs. 1 and 3A), but that's only half of the story. It also contains an ingenious swinging arm and trigger release arrangement to flip the selected card from a hiding place in a rear slot of the base up to the ring. A short needle point soldered just below the card clip will burst the balloon a split second before the card takes its place —too fast for the eye to see the card move.

The three-step pedestal is more than decoration. In addition to the card slot, there is a second slot for a lead weight which is needed to maintain balance when the metal arm is sprung. Make the metal frame for the balloon (Fig. 3A) by bending some soft 1/4-in. dia. copper tubing into a 6-in. dia. ring. Exact size and shape is not critical, except for sake of appearance. A paint can or sauce pan of approximately this diameter may be handy for use as a mold. Cut a 7½-in. length of 7/16-in. dia. brass tubing, shape one end to hold ends of the copper ring, and solder in place.

Prepare the lower base by cutting five pieces of plywood as in Fig. 5B. You can use a coping saw for the cutouts in the two 1/4-in. thick pieces. Since the cuts won't show, they needn't be perfectly straight; also, the corners can be slightly rounded. The top slot should be a full 3½ in. deep to admit the full length of the playing card. Fill the bottom slot area with a lead weight, then assemble the five-ply lower base with glue. When dry, sand edges smooth.



MATERIALS LIST—CARD IN BALLOON

No. Req.	Size and Description
	Box
1 pc.	1/4 x 9 x 9" plywood (top, sides, base)
1 pc.	1/16 x 2 5/16 x 3 9/16" balsa wood (flap)
1 pr.	1/4 x 1/2" brass butt hinges for 1/4" stock (join box halves)
Misc.	glue, dead black paint, varnish, 1/4" escutcheon pins
	Balloon Stand
1 pc.	3/16 x 4 x 13" plywood (lower base)
1 pc.	1/4 x 4 x 9" plywood (lower base)
1 pc.	3/4 x 3 3/8 x 3 5/8" pine (top parts of base)
1 pc.	1/4" O.D. x 20" copper tubing (ring)
1 pc.	7/16" O.D. x 7 1/2" brass tubing (ring arm)
1 pc.	1/4 x 1/4 x 10" stainless steel angle (base decoration)
1 pc.	1/16 x 3/16 x 6" steel strip (card-carrying arm, arm pivot)
1	3/8 x 5/8" spring metal clip (card holder)
1 pc.	thin-gage x 5" long spring steel wire (arm spring)
Misc.	glue, lead weight, 4 short legs or rubber feet for base, red and black enamel, 2 #10-32 x 1" bolts, 3" stiff wire, small screw eye, 3" light spring-steel wire, 3" fine black thread, wand, 2 four of spades playing cards

Cut the two top parts of the base from 3/4-in. scrap wood, then glue together and to lower base as in Fig. 4A and C. Locate center of the top piece and bore a 7/16-in. dia. hole about 1 1/4 in. deep for a snug fit with the arm of the balloon frame. If loose, glue in place. Install four short legs to the underside of the base at corners, such as the miniature spools in Figs. 1 and 2, or rubber feet. Finish and decorate stand as in Fig. 4A.

For the card-carrying metal arm, cut a strip of 1/16 x 3/16-in. steel or brass strip 4 1/4 in. long, round the ends and drill #21 holes through at center point of each end diameter. Fashion a small clip out of thin, springy metal to hold the card and attach this to one end of the arm with a small bolt. Threading of bolt should make a tight fit in sleeve of clip, providing enough tension to hold the clip steady, yet swing it out when the arm springs up.

Fashion a small arm pivot out of the same metal strip used for the card-carrying arm, attach the other end of the arm to this pivot with a 10-32 headless screw, and solder pivot to the back of the balloon stand exactly 4 in. below the copper ring as in Fig. 4C.

Now you can cut off the head of a straight pin and bend the wire about 1/2 in. from the point to a 30° angle. Solder the back portion of the pin to the side of the metal card clip facing the balloon ring so that the point will be aimed just above base of the ring.

Motive Power for the Arm comes from a piece of spring-steel wire about 5 in. long. Fashion a spiral in the center to coil around the screw at the arm pivot, so that tension will force the arm up when one end of the wire is behind it while the other end is attached to the stand. Solder the ends in place.

You can make the trigger release as in Fig. 4D with a small piece of stiff wire anchored at one end with a screw eye and held temporarily at the other by a small hook turned into another short wire extending in hinge fashion from a nearby screw. A slight sideways tug on the hooked wire will pull it past the end of the trigger wire, at which time the spring wire will throw the arm up quickly.

Since the trigger isn't shown to the audience, neither should its release action, so attach a strong but very fine black thread about 2 to 3 ft. long to the hooked wire and tape the other end to your magic wand which can lie on the table alongside the trick without raising suspicion. Then, at the appropriate time, the wand is picked up and the unnoticed thread pulls the trigger.

As soon as you load the arm with a duplicate of the "selected" card—say a four of spades—pull back the arm, insert card in the base slot, set the trigger, and you are ready for the showing.

Show a Toy Balloon at the start, inflate it, and place it in the ring. Then, use the Svengali Deck or another method to force a four of spades upon a spectator. Have him place the selected card in the card box. Close the box and lay it on your left hand, placing the thumb underneath. Step to the table and pick up the wand with your right hand, the left hand turning the box over with its thumb.

This brings the bottom side up, but the box looks exactly the same. The flap now hides the card. Tap the box with the wand and replace the wand on the table. Open the box and show that the card is gone. Pick up the wand again and step away from the table, drawing the thread taut as you wave the wand toward the balloon. This releases the trigger, the arm flies up and the needle pierces the balloon which bursts into fragments. The card appears as if it had been in the balloon.

Handle the wand with extreme care. Too much movement in the wrong direction will not only fail to release the trigger, but may move the stand.

If you prefer, you can "force" a card with the card box, an ordinary deck of cards, and only one extra four of spades. But the box will need two flaps of the type described. First, load one four of spades in your stand. Put the other in the box, face up, and lay a flap on it. Put the other flap in the lid of the box.

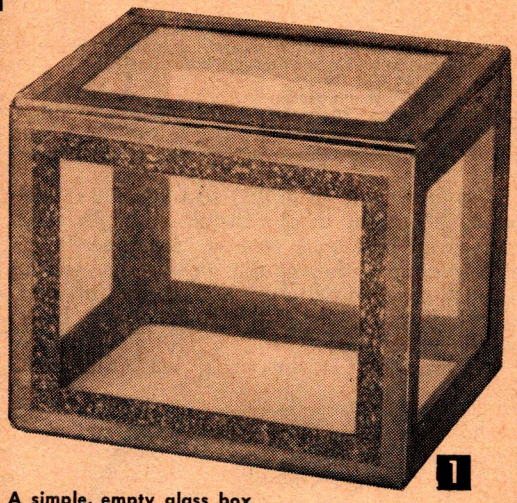
Have the spectator take a card from the pack (which contains no four of spades) and put the card in the box, face down without looking at it, saying that you will make it disappear. Close the box by bringing the two sections up together and turn it over while you are doing so. Then, tell the spectator that he should have looked at his card. So open the box and take out the card.

You show him the four of spades. The box looks empty since the card he originally selected lies between the two flaps. Put the four of spades, face up, in the box and close it. Turn the box over in the usual way and both flaps will fall, hiding the two cards.

The amazing case of

The Crystal Casket

★ **First it's empty, then suddenly it's filled with colors**



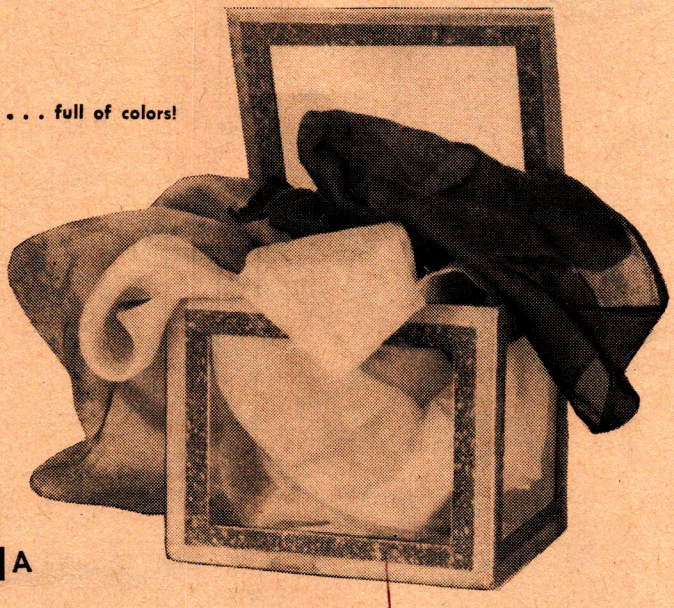
1

A simple, empty glass box . . .

THIS is a very simple trick, but it has the charm of all tricks that accomplish impossible results with deceptively innocent-looking devices.

The performer holds up a small box with clear glass on all sides, showing it to be completely empty (Fig. 1). Then, at a word of command, the box is instantly filled with silks of many colors, apparently derived from thin air (Fig. 1A).

Of course, the casket is not quite so simple as it appears, nor nearly so empty. The trick does depend on a simple device, however—



. . . full of colors!

1A

one fake wall, held up by a tiny wire catch.

Construction. Make up the box from single thickness window glass, cut to the sizes shown in the Materials List. Butt the joints as in Fig. 2C with each panel overlapping the next. The panels may be joined with the tape that is used to decorate the casket. This is *Scotch*-brand plastic tape, available in many colors. Choose a dark color such as blue for the bottom layer, which should extend ¾ in. on the panel; gold might be a good choice for the top layer, which should extend ⅜ in. (Fig. 2A). This tape is also used to hinge the top panel at the back.

Inside the box the joints are taped in black, securing the glass firmly. This tape should also extend to ¾ in.

A wood brace, ½ in. high and ⅝ in. thick, is fitted across the top of the back panel (Fig. 2C). Drill through the center of this brace with a No. 55 drill, and insert a piece of 18-gage wire, bending the wire as in Fig. 2B for use as a catch. Cover the brace with black velvet.

MATERIALS LIST—CRYSTAL CASKET

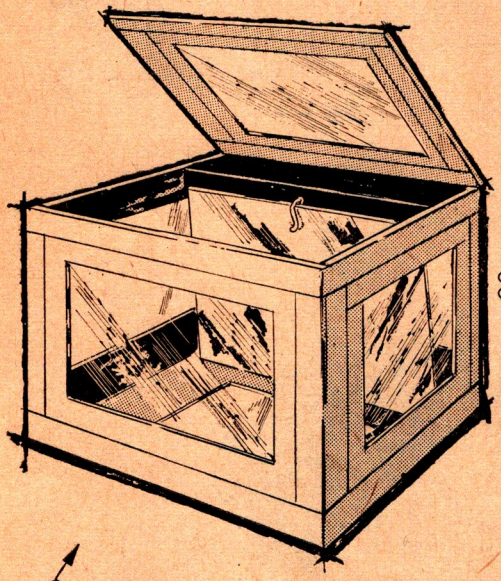
No. Req.	Size and Description
2 pcs.	1/8 x 4 x 4" window glass (sides)
1 pc.	1/8 x 4 x 5" window glass (front)
1 pc.	1/8 x 3¾ x 5" window glass (back)
2 pcs.	1/8 x 4 1/8 x 5 1/8" window glass (top and bottom)
1 pc.	thin gage stainless steel or aluminum, 3½ x 4¾" (fake wall) (can be cut out of an ordinary cookie sheet)
1 pc.	½ x 5/8" wood (brace)
1 pc.	2" x 18-gage wire (catch)
Misc.	Scotch-brand plastic tape, colored and black; velvet-type fabric; glue; colored silks

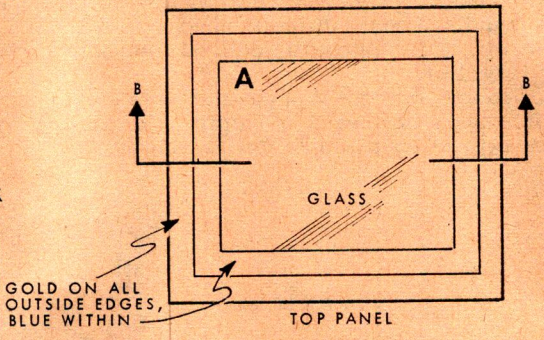
The fake wall (Fig. 2B) is a stainless steel panel, 3½ x 4¾ in., bordered in black tape both front and back to give the appearance of being one of the regular glass walls. Hinge it to the bottom panel with tape just forward of the joint between the bottom and back panels (Fig. 2B).

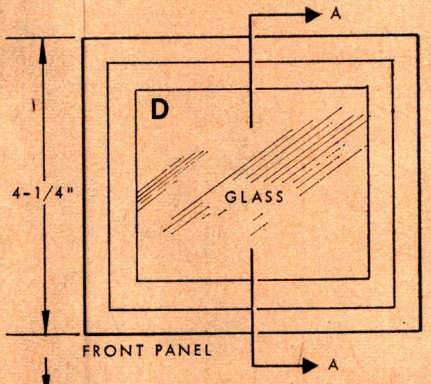
To prepare for the trick, load the back compartment with several silks and secure the catch. Make sure no silk edges protrude from the edge of the flap.

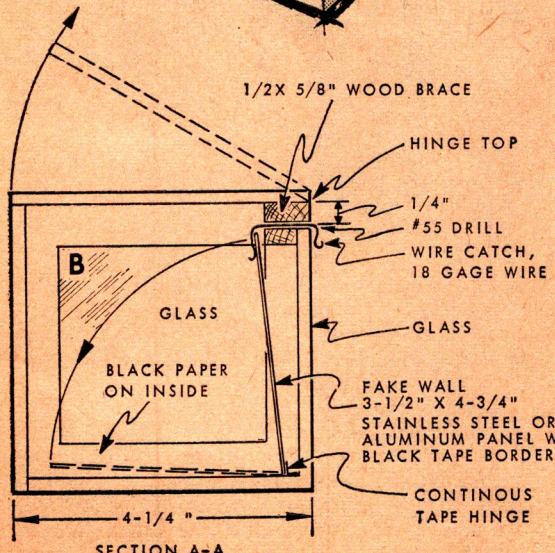
To Execute the Trick, hold up the box, demonstrating that it is empty. Try not to hold it directly from behind the rear panel, as an observant member of your audience may wonder why your hand does not appear through what is presumably a panel of glass. After you have convinced the spectators, slip a finger up to the wire catch. Give a command, release the catch, and the casket will be suddenly full of silks, as if by magic. Open the top, and bring out the silks.

If, at the time you release the catch, you also move the box up and down slightly, you will ensure that the fake will come down: and this movement may also serve to make the gimmick less easily noticeable.—V.D.D.

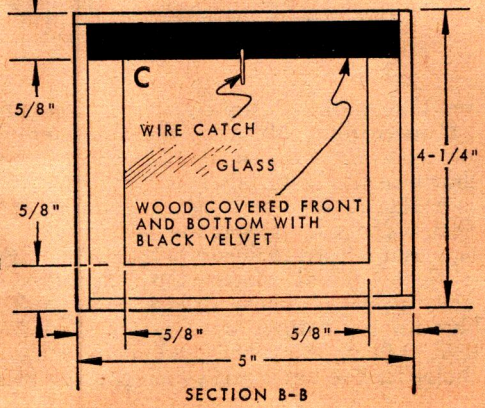








SECTION A-A



SECTION B-B

2 CRYSTAL BOX

How to vanish and find any card with

The Mental Pack

THE magician grips a pack of cards upright in his left hand and riffles the upper end of the pack with his right thumb, showing that the cards are all different. Next he turns the pack around and riffles the cards again, showing that the backs are all the same —an ordinary pack.

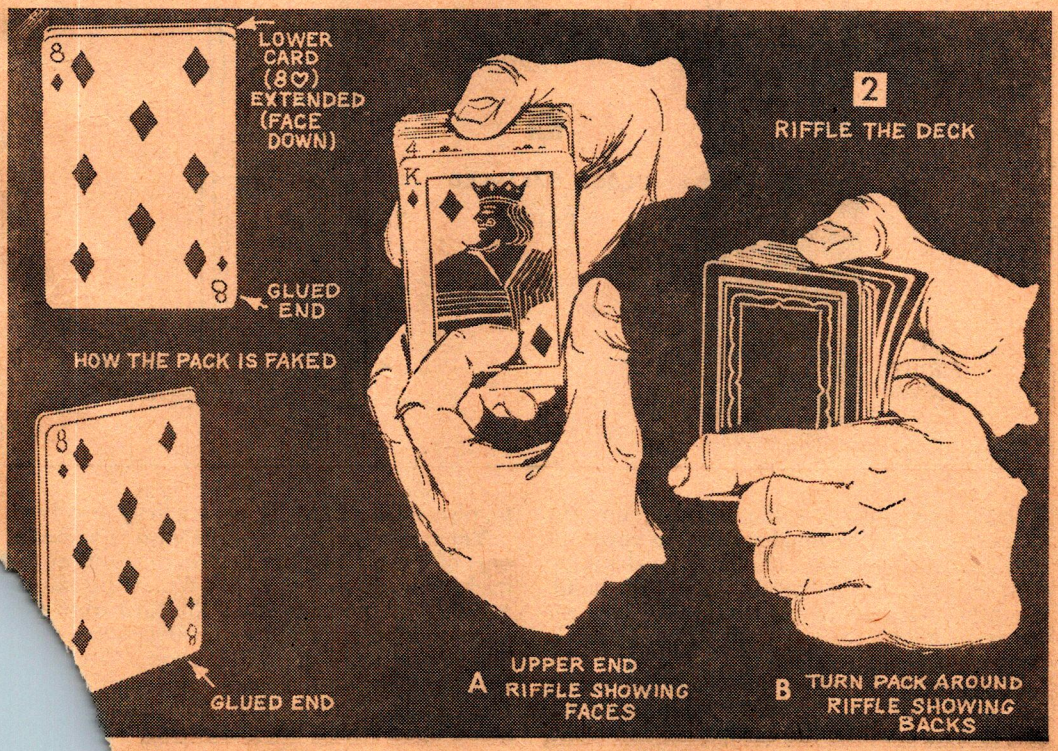
He then spreads the cards face up across the palms of both hands and asks a member of his audience to remember any card he sees, but without naming it. The magician turns away while this person whispers the name of his card (say, the six of spades) to the others.

Again the magician spreads the pack, and *the chosen card is gone.* The magician asks the name of the card, and goes through the pack, but there is no sign of it. Therefore he puts the pack behind his back and a moment later brings it out again. He turns the pack face up, and there is the missing six of spades!

A Special Pack makes this simple trick possible. It can be easily made, but the work must be neatly done. Take an ordinary pack with *white margins at the edges* of the backs (this is important), and arrange the cards in corresponding pairs; that is, two red 10s pair (10 of diamonds and 10 of hearts), as do two black kings (king of clubs and king of spades). Sort the whole pack into 26 such pairs.

Glue each pair of cards back to back, along a narrow strip at one end only, as in Fig. 2. Let one card in each pair extend 1/16 in. beyond the end of the other: this must be exact, with the side edges of the cards perfectly aligned. Use just enough cement to do a good firm job.

The loose ends of each pair of cards will have an extended white margin. Lay the cards on a table with the glued ends toward you, the long-margin ends away from you. Place the joker, face down, on top of the



pack; all of the cards will then appear to be face down.

Performing the Trick. Pick up the pack with your left hand and tilt it up so the audience can see the face of the card on the bottom. Riffle the upper end of the deck with your right thumb, and only the "long" cards will flip by, showing faces only (Fig. 3A). Turn the pack around and riffle it: this time, only backs will show (Fig. 3B). The pack will seem normal.

Turn the pack over again so that the long cards are face up. Now spread the cards from hand to hand (Fig. 1), showing them separately; only the face-up long cards will be seen. Have someone select a card mentally (as, the six of spades).

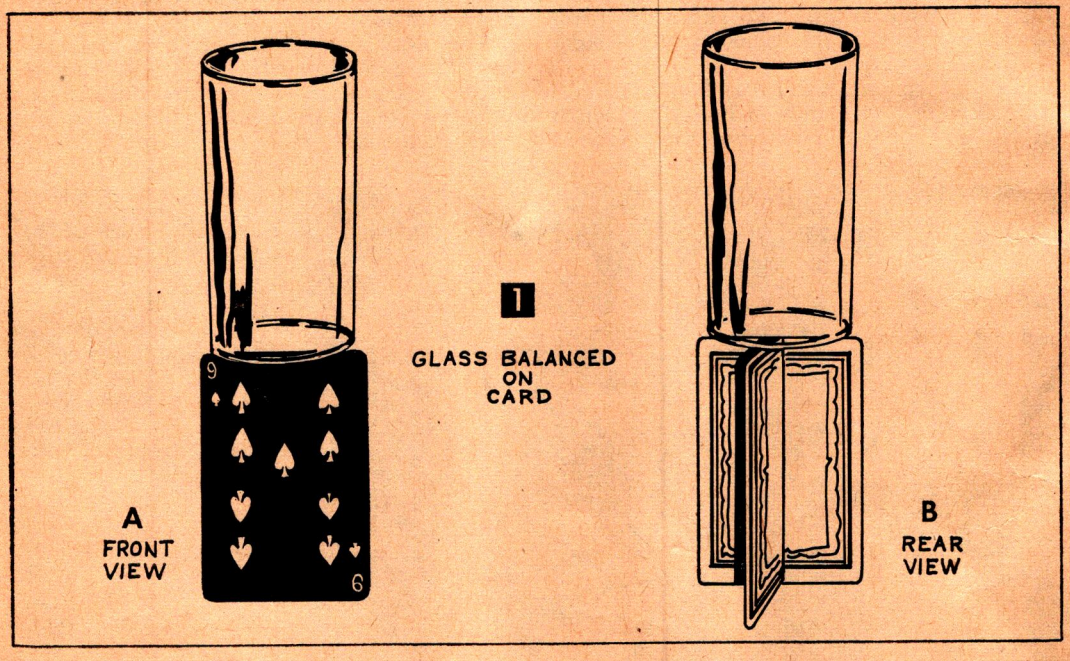
While he whispers it to others, turn away, and quickly turn the pack over, putting the joker face up underneath. This brings all the short cards face up. Show the pack and spread the cards, telling the chooser to look for his. He won't find it, because it is now among the long cards, which are all face down.

When he is convinced that his card is gone, ask him to name it. He says, "six of spades," and you look through the pack, only to find that it is really gone. But you are actually looking for its mate, the six of clubs. When you come to it, push it a little way out from the rest.

Now put the pack behind your back, draw out the projecting six of clubs, and put it on top of the pack, turning it over as you do. This brings the six of spades face up on the pack. Remark that it's odd no one could find the six of spades by looking for it, because all you have to do is feel for it. Bring out the pack, and there it is.

Defy gravity with a

Glass Balanced on a Card



THIS looks like a difficult trick, but it's very easy. The magician sets a card upright on the table and places a drinking glass on the upper edge with his other hand. When he takes his hands away, the glass remains balanced on the card (Fig. 1A). It stands upright on its own.

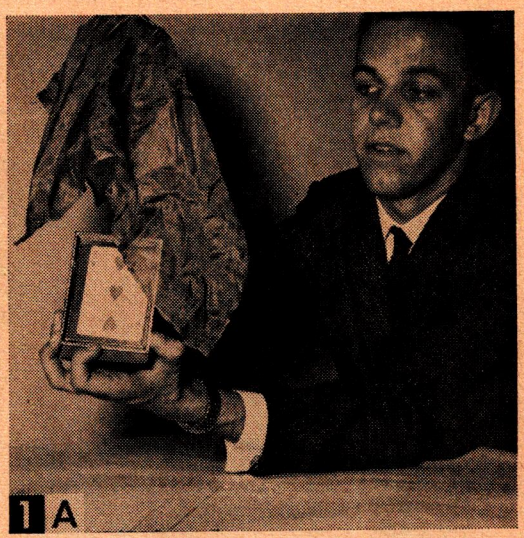
After doing the trick, the magician shows the audience that the glass is an ordinary one, and he exhibits the card, back and front, to prove that there is no trickery involved.

Yet trickery there is. The card is a special one, of double thickness, with one half of th back consisting of a flap. When the flap pressed flat, you can show the card front back without revealing the deception, before and after doing the trick. Wh ting the glass on the card, you secretl the flap back, as in Fig. 1B. This stand upon which the glass rests.

The puzzle of the

Appearing Card in a Frame

Here we have a completely empty frame . . .



. . . but, with the help of a magic handkerchief . . .

TRULY magical is the sudden appearance of a playing card in a small glass-fronted picture frame. And the mystery cannot be solved by members of the audience even though they examine both frame and card on completion of the trick. Yet the equipment used can be made up very easily from an ordinary gilt-edged frame, size 3½ x 4½ in.

Such frames consist of three simple parts: 1) the frame itself, with slotted sides and one partly open end; 2) the glass, which slides into the groove and then drops to the front of the frame; 3) the cardboard backing, which goes into the groove and holds the glass in place.

To convert the frame to magical use, you will need two other items: a sheet of thin colored paper to cover the interior of the cardboard backing, and a small piece of taffeta or rayon of a matching color.

Cover the inside backing with the colored paper—dark blue is a good color—and carry the ends of the paper over the top and bottom, forming narrow bands on the outside backing. Glue this paper firmly in place. Next, cut the piece of fabric to the exact width of the cardboard backing, but 1 in. longer so that it can be carried over the top edge and a little way down the outside of the back.

Prepare the frame as follows: slide the glass into the frame. Hold the frame with the glass downward and slide the cloth into it. Lay a playing card face down upon the fabric. Slide the backing (colored side down) into the frame. An inch of fabric will project at the top, so bend it over and work the edges firmly beneath the back portion of the frame.

The frame can now be shown freely; it will appear to be absolutely empty (Fig. 1), as the fabric showing beneath the glass looks like the cardboard backing, although it actually conceals a playing card beneath it.

Hold the frame upright in the left hand, its front toward the spectators. Cover it with a handkerchief. Gripping the handkerchief above the frame, the right thumb and fingers must also grasp the projecting fabric, working it into the fold of the handkerchief. When the handkerchief is pulled away, the fabric comes with it, revealing the playing card.

Hand the frame to the spectators for immediate examination. The fabric is simply laid aside with the handkerchief, its presence unsuspected.

Note: Many stock frames have a cardboard leg attached to the outside backing, so they can be set up like an easel. Remove the leg or use another sheet of cardboard for backing, for the purposes of this trick.

MATERIALS LIST—APPEARING CARD IN FRAME

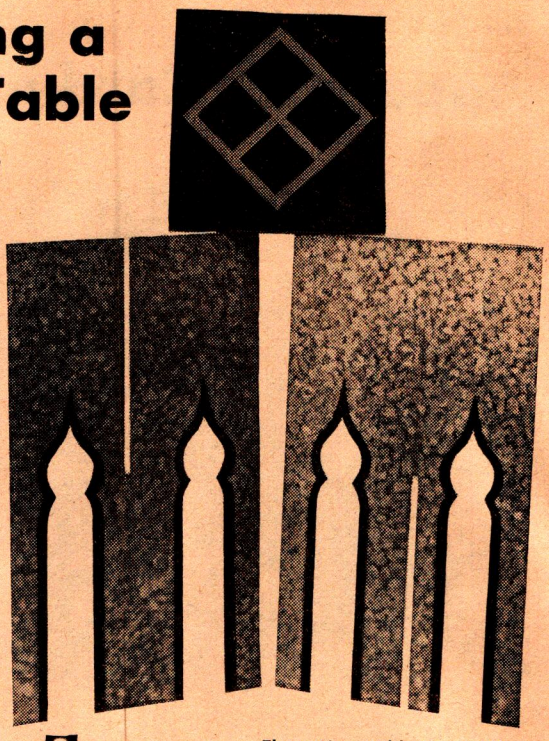
No. Req.	Size and Description
1	3½ x 4½" gilt-edge picture frame
1 pc.	4 x 5" thin colored paper (dark blue, brown, or maroon)
1 pc.	3½ x 5½" taffeta or rayon (same color as paper)
Misc.	glue

Building and Using a Magic Black-Art Table

★ **Make one of the magician's most practical tools out of a composition board—it will help you during every stage of your act**

1

Magician in act of vanishing a nearly full glass of water. Audience on other side thinks he is holding glass in handkerchief which conceals the real action. He's actually holding a ring, of same diameter as the glass top, which is sewn inside 2-ply silk.



2

Three-piece table is quickly set up or dismantled.

SPECIAL tables are an important adjunct to a magical show. They have eye appeal and add an atmosphere to the performance. But while the audience regards them as purely ornamental, they serve a highly important purpose for the magician. The best known example is the popular "black-art table," designed for easy disposal of various objects as in Fig. 1.

This innocent looking piece of furniture will swallow up a multitude of things you want to disappear during a show. Its success depends on a top with a well cut into it and your ability as a craftsman to conceal it.

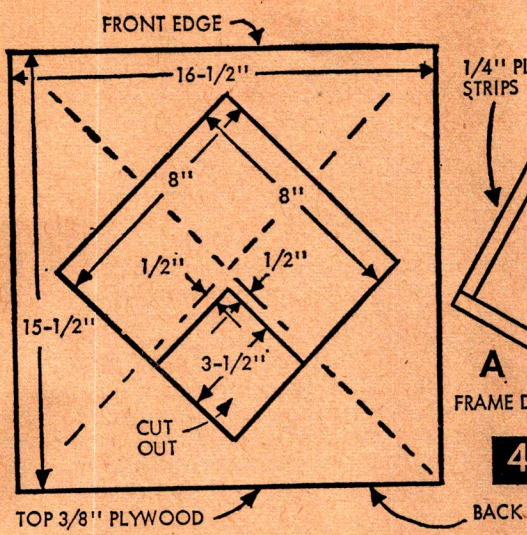
Elaborate black-art tables can be made with comparatively little difficulty but none are more effective than the very simple version shown knockdown in Fig. 2. Top and base can all be cut out of a ⅜-in. plywood or particle board. Natural finish of the latter furnishes a better background where concealment is important.

Cut the Plywood Top as in Fig. 3A and mark off the two diagonals as guide lines from which you can lay out a diamond-shaped figure measuring 8 in. on each side. In the diamond formed nearest the back, scribe lines ½ in. back from the diagonal guide lines to form a 3½-in. square. Cut out this square to make a straight-edged hole through the table top.

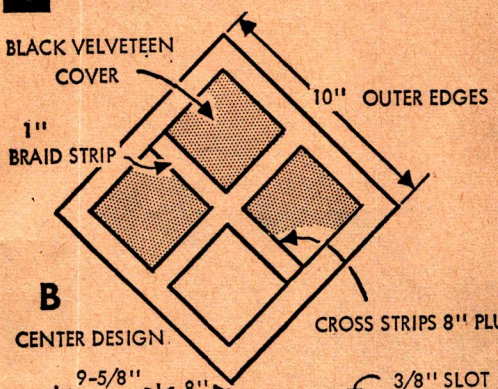
Cover the top with a piece of black velveteen which is 1 in. longer and wider. Center this and tack down the ½-in. margin around each edge. Cut two cross-slits in the velvet above the hole so that the cloth will drape through in pointed flaps. Work these down past the edges of the cutout, tack in place underneath and cut off any surplus.

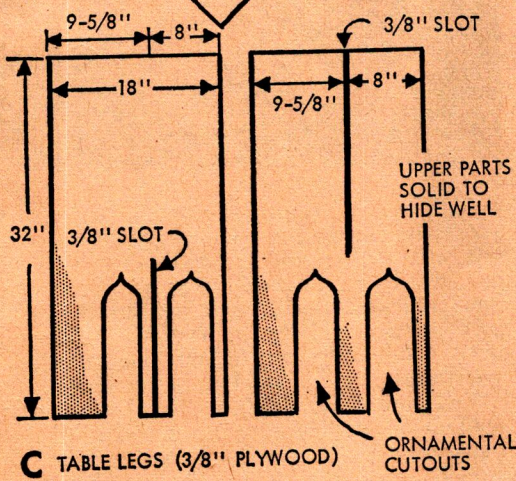
Build a small frame of 3½ in. square inside measure to fit under the top opening as in Fig. 4A; scrap pieces of ¼-in. plywood will do. Into the frame fit a square-walled pocket made of the same velveteen installed on the top. This pocket will require a 15-in. strip of the cloth, allowing 3½ in. to each side, plus 1 in. extra for tacking or overlapping edges on top of the frame as well as to form a seam at one corner of the squared pocket.

Width of the strip depends on how deep you want the pocket. For a 6-in. depth, you'll need a strip 7 in. wide to allow for tacking to the frame and for a bottom seam. The latter is firmly sewn to a bottom piece of the same

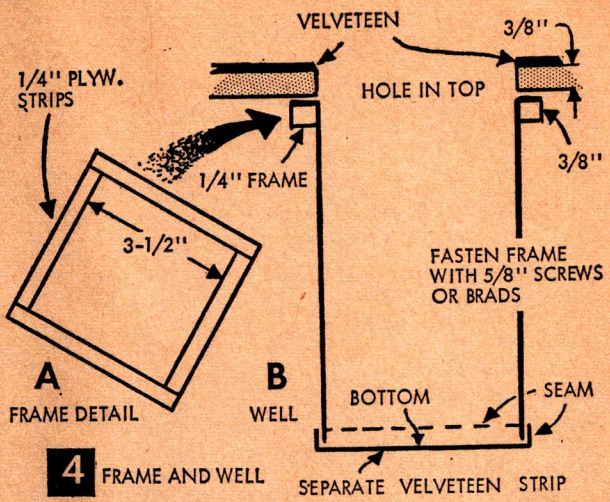


3 A TABLE TOP DETAILS

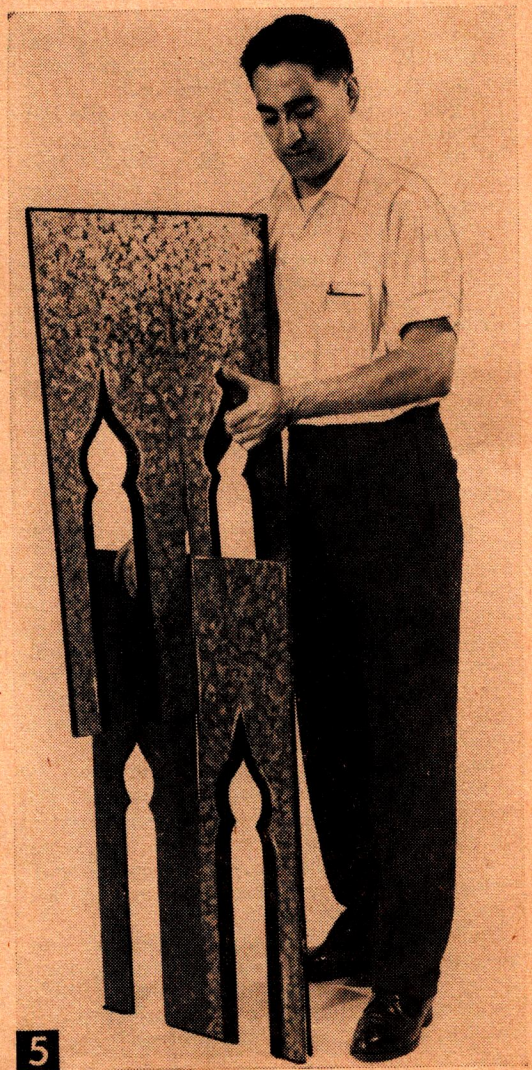




C TABLE LEGS (3/8" PLYWOOD)



4 FRAME AND WELL



5

Leg sections slide together to form strong base. Solid area is intentionally large to hide well of size sufficient to hold several "vanished" articles.

MATERIALS LIST—BLACK-ART TABLE

No. Req.	Size and Description
1 pc.	3/8 x 36 x 48" plywood or particle board (top legs)
1 pc.	24 x 24" black velveteen (top cover, well)
1 pc.	1" wide x 5' gold braid (form for diamond pattern)
1 pc.	1/2" wide x 5 1/2' gold braid (to run around top's side edge) (above 3 items available in yard good stores, mail order houses)
Misc.	black thread, 1/4" plywood scrap, 1/4" tacks, 5/8" brads or screws, 1" long *fh* machine screw with wing nut, paint, decals, or other decorations, glue

material, cut about 5 in. square. Now attach frame and pocket with 5/8-in. brads or screws. This is termed a well because it is left open at the top.

To Conceal the Well, sew gold braid or ribbon 1 in. wide along lines of the diamond pattern, which will establish a pattern of four diamonds the size of the well opening. Cut cross strips a trifle over 8 in. long so that you can tuck ends under 10-in. long outside strips.

While one of the four black squares showing on the tabletop is the well, it will be invisible to others since the contrasting braid masks the edges. Check to see that there is no break visible in the velveteen.

If you've done a good job, you would have difficulty finding the well yourself if it were not for the simplicity of the pattern. Magicians have been fooled by more complicated patterns with three or four times as many diamonds.

Build a base of two slotted crosspieces as in Figs. 2 and 3A. They go together easily as in Fig. 5 to form a sturdy support, which can be cut to hide as long a well as you want. Note that the 3/8-in. wide slots are sawed off-center, providing 8-in. wide portions in front and 9 5/8-in. portions toward the back.

Cut the bottom parts of the base to form ornamental legs with the design of your choice, after checking to see that the well will remain hidden.

Paint the base red, with gold decorations and dark stripes along the cut-out legs. To hold top firmly in place, attach a small angle iron at an inner corner of a side leg and flush with the top at a point under a braid line. Move the braid temporarily and drill a hole through the top for a flathead machine screw 1 in. long. Whenever you set up the table, pass the bolt through the angle iron on the base and fasten with a wing nut.

To Vanish Small Objects in the black-art table, simply let them drop into the well. For example, if a ball is on the table in front of the well, you can pretend to pick it up, cover it with your hand, and push it into the well, while your hand continues upward as if it were still carrying the ball.

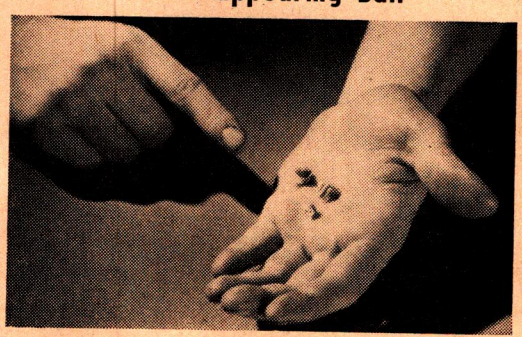
Exchanges are similarly handled, by concealing one object in the hand and pretending to pick up another that is lying on the table. The latter can then be pushed into the well and the hidden object brought to view instead.

Articles can also be "produced" from the well. A bundle of "spring flowers" can be fixed with a threaded loop and placed in readiness. After producing some silks, you can drop them on the table above the well. In gathering the silks, you can lift the hidden bundle along with them. When the bundle is released, the flowers spring open and appear from amid the silks.

To get rid of a palmed object, keep your wand handy on the table in front of the well. As you pick it up, you can drop the object in the well. Similarly, you can dispose of articles such as silks and blocks that are hidden in a tube. When the tube is set upon the table, the hand pauses momentarily above the well, letting the hidden article fall. The hand can then move a little further, and place the tube upon the solid part of the table, from which it can be lifted later and shown to be empty.

A pair of black-art tables make a very attractive setting for an elaborate show. They should be placed far enough apart for the magician to work back and forth between them, putting apparatus on one table or the other at his convenience. By having a well in each table, one vanishing act can quickly follow another.

The Reappearing Ball

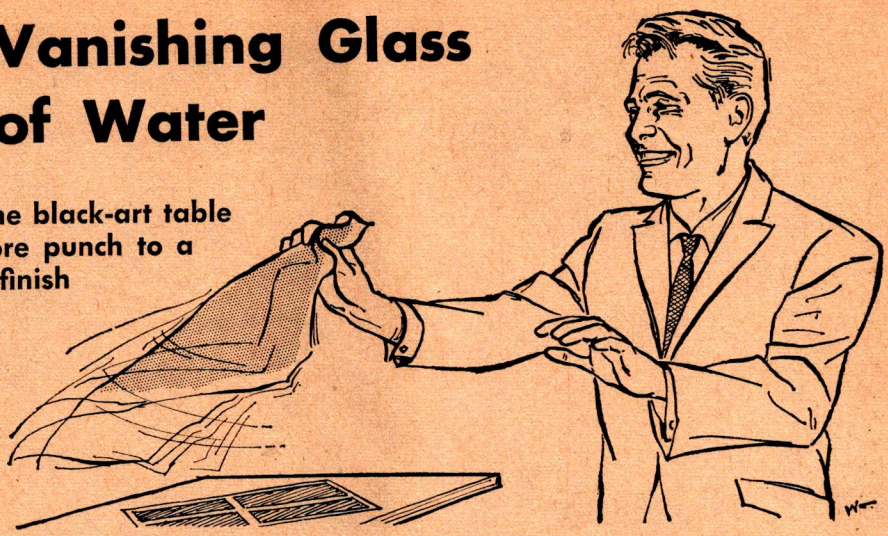


• Make three little balls of paper in front of your friends. Put two of the balls into your left hand and close that hand. Put the third ball into your pocket. Now open the left hand, and your friends will find that the third ball has rejoined the other two. Take one away again and put it in your pocket. Open your left hand, and the ball has returned.

You have four balls, the first of which you made before your performance and concealed between the tips of the first and second fingers of your left hand. As you close that hand the first time, let the concealed ball drop into the palm. The ball that goes into your pocket stays there only long enough to be concealed between the fingertips of the right hand. Drop it into your left hand (secretly) as you take a ball out the second time around.

Vanishing Glass of Water

★ **Use of the black-art table adds more punch to a surprise finish**



HERE'S an excellent trick when injected at the appropriate spot in a program, for when neatly done it will create a real surprise. The magician drapes a handkerchief over a glass of water (see p. 34, Fig. 1), carries it forward, and gives it a sudden flick. While people are dodging the glass they think is flying at them, they find to their amazement that it has vanished completely from the handkerchief. And it stays vanished until its presence is wanted again, thanks to the well of the black-art table.

This secret greatly simplifies the use of another, a special handkerchief which is made double with a wire ring in between (see p. 120, Fig. 3). Stitching from the corners to the center forms a V so that the ring slides naturally to the center when you pick up the handkerchief.

Cover the glass, which is standing in front of the well, so that the hidden ring rests over the rim. When you're ready to pick up the glass, simply grip the ring through the double cloth with your left hand and lift it slowly, while the right hand reaches in from the back to grasp the glass and steady it.

Steady it, the right hand does, but instead of bringing it up with the cloth, the hand lowers the glass down into the well, as the other hand lingers just long enough to cover the operation. Both hands then come upward as you step forward, with the left hand delicately holding the ring through the cloth.

Catch a lower corner of the cloth with the right hand, give the cloth a forward toss, and the vanish is done. The ring slides down into a corner of the double handkerchief, which can then be shown on both sides—positively empty. For a convincing touch, add to the illusion by using a pliable wire ring. Then draw the handkerchief through your fist.

This is a simplified, though good alternate for the "Vanishing Bowl," described on p. 120. Though not as spectacular, it furnishes something of the same surprise without the need for a more complicated vanishing treatment.

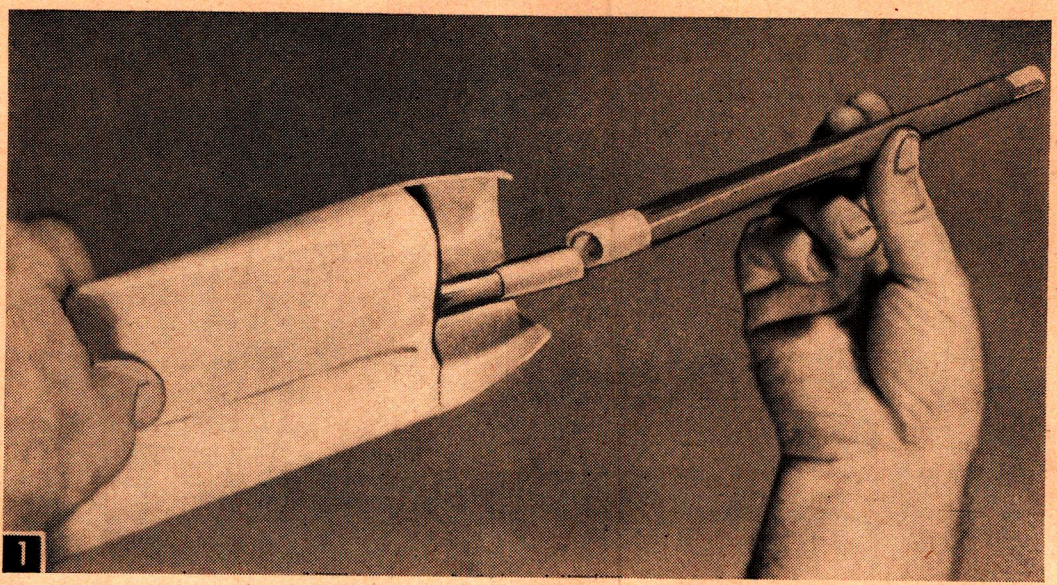
Bring the Water Back, if you wish. Reach into your pocket, bring out a glass of water, and take a sip from it. Then place it on the table, just as though you habitually carried such articles with you. Being a magician, you should!

This feat is done with the aid of a simple plastic cover of the type sold with groceries to fit bowls, milk bottles, etc. All have an elastic edge to hold them in place, but select one that will fit tightly over a duplicate glass of water. If necessary, put a rubber band around the outside to hold the cover more firmly and to ensure that it is watertight.

What makes the trick good is the manner in which the glass is produced from the pocket. It is placed in a side pocket of the coat—say the right—shortly before the trick is to be presented. During the vanish of the glass, that side of the body is turned away from the audience. This is normal when you're working with a table.

To bring back the glass, turn the right side toward the audience, and place the left hand beneath the coat, gripping the glass through the cloth inside the pocket. At the same time, remark: "If you've wondered where the glass has gone, here it is—right in my pocket!"

Dip the right hand into the pocket. Peel off the glass cover, letting it drop. Bring out the glass with the right hand, raising it so that everyone can see that it is filled with water. No one sees the steadying action of the left hand underneath the coat, so it looks as though the right drew out the glass in a manner both casual and magical.



1

Solid wand sliding from its paper shell "twin" into long envelope after probing through it to make certain it is empty. Shell wand should be down below flap of envelope before the real wand is released. Position here is purposely high to illustrate the method.

The Traveling Wand

★ One of the principal aids in trickery stands ready to perform magic on its own

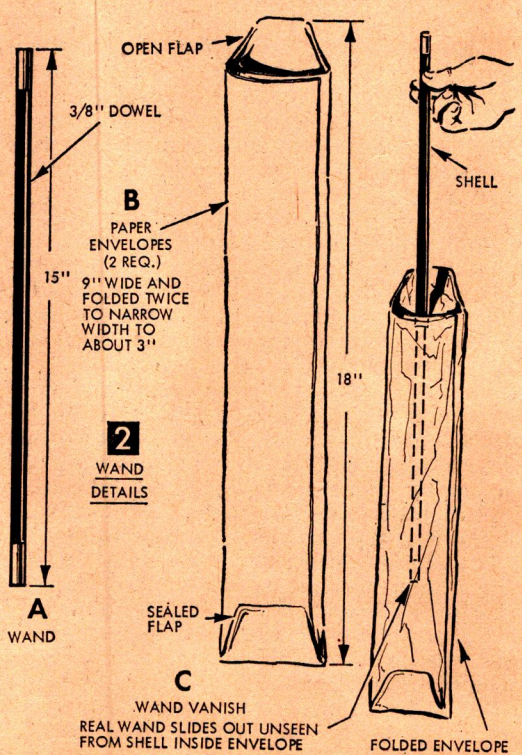
THAT right-hand tool of the magician, the wand, can figure prominently in certain mysteries of its own if given the opportunity. Exposure of its talents makes a good opening number for a show.

The magician raps his wand against a table to prove that both are solid. Then he opens the end of a long, narrow envelope to show that it is empty and, as further proof, rattles the end of his wand inside. He does the same with another envelope, then seals it and puts it aside. He drops the wand in the first envelope, makes a magic pass and crumbles the envelope—even tears it to pieces.

The wand has obviously disappeared yet when the magician opens the second envelope—the one he laid aside—there it is, big as life. He removes it and raps it on wood to prove that it's solid.

Genuine wands are easy to make up. Merely cut a 15-in. long piece from ⅜-in. dowel, paint it (preferably glossy black) and provide each end with 1½-in.-long tips of gilt silver, aluminum, or copper, as in Fig. 2A. Tips can be painted on or you can shape them from paper, foil, or thin-gage metal sheet and glue in place.

For a Performing Wand, make up a "shell" of glossy paper which duplicates the size and colors of your real wand. Wrapping



MATERIALS LIST—TRAVELING WAND

No. Req.	Size and Description
1 pc.	3/8" dia. x 15" dowel (wand body)
1 pc.	2 x 15" solid-color dark paper (shell wand body)
2 pcs.	18 x 22" plain brown or white wrapping paper (envelopes)
Misc.	glossy black or other dark color for wand; gilt, silver, or aluminum paint for tips; gold, silver, or copper paper for shell wand tips; glue, rubber cement, tape for envelope seals

paper is satisfactory for the shell. If you have solid-colored paper to match the wand, use it; otherwise roll wrapping paper around the wand about 1½ times and shape it at the ends to make a slightly loose fit. Use gold, silver, or copper paper to add matching tips.

Shape two envelopes from plain brown or white wrapping paper as in Fig. 2B, large enough to accommodate the wand and 9 in. wide so that each can be folded in threes and have the two sides pasted together. Start with paper 22 in. long to allow for a 2-in. flap at each end. Paste one end of each envelope in place, but merely gum the other so it can be sealed later, or provide cellulose tape to do the job.

Before Facing Your Audience, place your wand in its paper shell. Now, pick it up, tap the table, then place it in your right hand, while showing an empty envelope with the left. Because of the envelope's odd shape, it is natural to insert the wand inside to open it and prove that it is empty.

Show the second envelope in the same way. This time, while the wand is still partly inserted, tilt the envelope mouth upward with the flap side toward the audience Release pressure of the wand and it will slide right out of its paper shell and down into the envelope as in Fig. 2C.

Now draw out the paper shell and hold it as if it were the solid wand, while you fold down the flap of the envelope and seal it with the real wand inside. Lay the envelope aside in full view; across a glass or against a chair back.

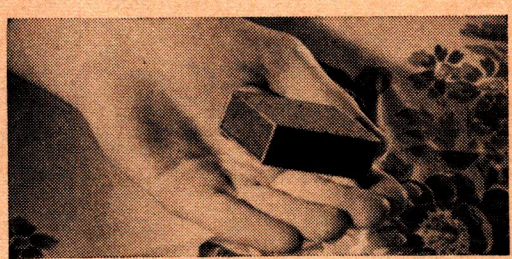
Pick up the first envelope and openly drop in the shell wand as though it were the real one. Seal this envelope and make some mysterious passes from one envelope to the other. After a short pause for dramatic effect, make a great show of crushing the envelope containing the paper shell, or tear it into several pieces.

As if this isn't startling enough, go to the other envelope, which the viewers saw you seal when empty, open it and let the wand drop out. Rap the table sharply with it and take your bow.

Cord-Arm Escape

• Can you remove the cord, hung from your arm as shown, without taking your hand out of your pocket or removing the vest? You can. Using your left hand: (1) bring the free end of the loop up over your shoulder, through the armhole of the vest, and over your head; (2) pull the loop down over your other shoulder and out through the left armhole of the vest; (3) pull your free hand and arm up and out of the loop; pull the cord down (underneath the vest) over your body.

Obedient Matchbox



• With your right hand lay a small matchbox across the fingers of your left hand. Then proceed to make the box rise and fall at your command. You can prove that the box is just ordinary, with no gimmicks attached, by immediately handing it out for inspection.

The secret? Open the drawer of the box slightly before laying it in your hand. Place the open end on the index finger of the left hand, and close the box as you do in such a way that a tiny bit of flesh is caught. Now, by almost imperceptible movements of the finger, or of your whole hand, you can cause the box to rise or fall.

Vanishing Made Easy

★ Two short cuts for the budding magician who wants to make small objects disappear

CAUSING an object to vanish is the high point of many magical tricks, but the ease with which it is done by the skilled performer is a knack most beginners acquire only after much practice.

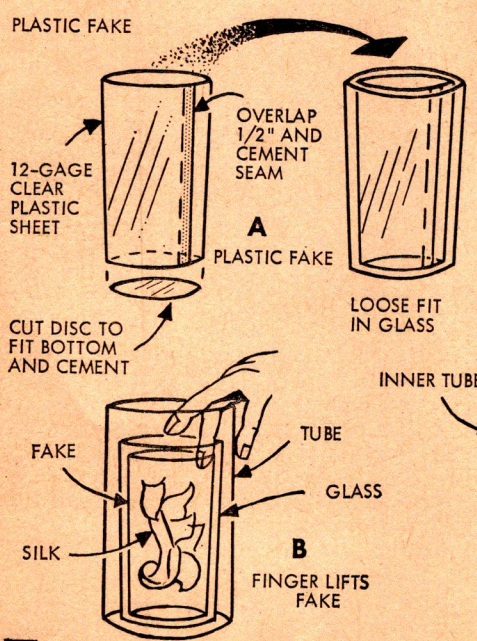
Here are two simple methods by which you can vanish small objects now, while polishing up on your performance of more difficult tricks. Both start out the same, but one has a delayed, surprise ending. It's advisable to use a magician's table, because the well may come in handy. Onlookers see only an ordinary drinking glass into which you put a silk handkerchief, or card, etc. (Fig. 1), and cover with a metal or cardboard tube. When the tube is lifted, the silk has vanished.

A Neat, Hard-to-detect Fake is the unseen factor. It is a lining for the glass cut from a sheet of clear plastic, shaped to fit loosely inside, and extended almost to the top as in Fig. 2A. The plastic can overlap and be a trifle out of shape; it won't show through the glass and can be picked up more easily. Cut a disk of the same material to fit the bottom and cement it in place.

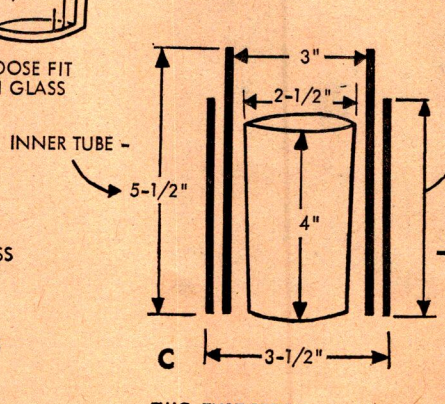
1

Object in glass will not be seen again once a tube is placed over it. Second tube is not necessary, but does add another surprise element to the trick. Rear diamond in table decoration is purposely darkened to show position of black-art well.

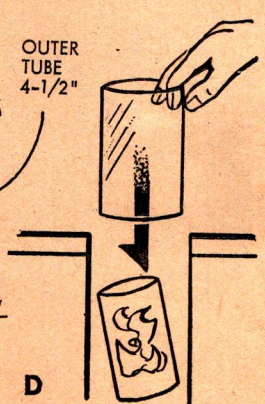
To vanish your material, stuff it into the transparent fake (Fig. 3) and place this in the glass so that the material appears to be resting there. Now cover the glass with a tube 1½ in. taller than the glass about ½ in. wider in diameter. You can make such a tube from a tin can of these dimensions by cutting off the ends with a can opener, or by modi-



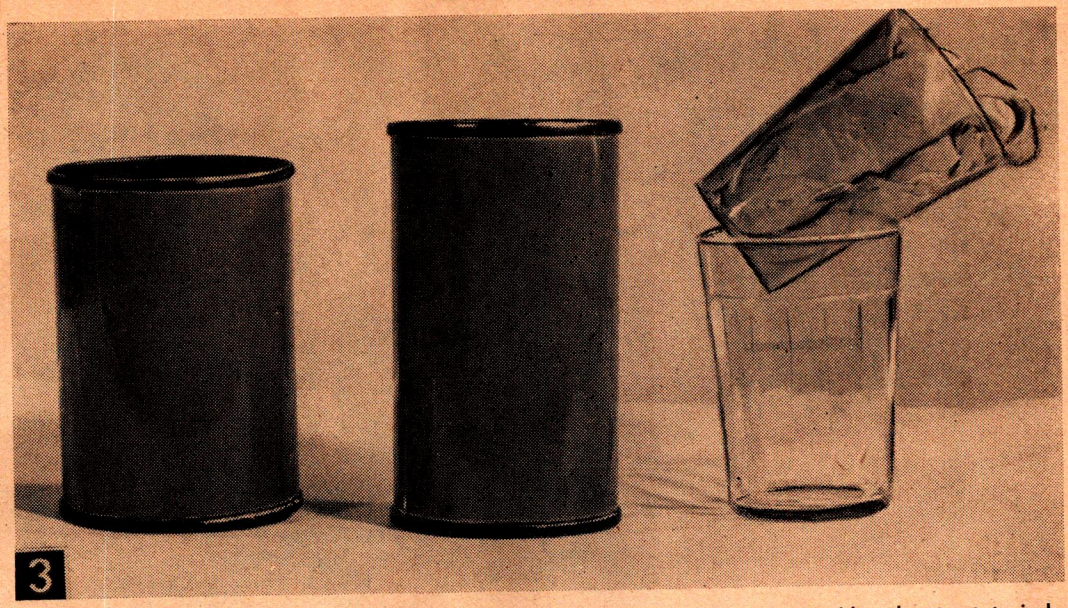
2 VANISHING OBJECT FROM GLASS



TWO-TUBE SETUP



FAKE DROPPED IN WELL



3

Closeup view of props for a simple "vanish": two tubes formed from ordinary tin cans with ends cut out, typical tumbler and plastic "fake" which holds article about to disappear.

fying a cardboard mailing tube. In either case, cover the outside of the tube with paint or decorative paper.

The vanish act occurs when you lift the tube. Put your middle finger down inside far enough for it to press against the fake as in Fig. 2B, preferably at the overlapped seam where added stiffness will improve your hold. Keep pressing your finger there with your thumb clamped on the opposite side of the tube; the fake will come out of the glass easily as you raise the tube. Show the glass to be empty and set aside the tube.

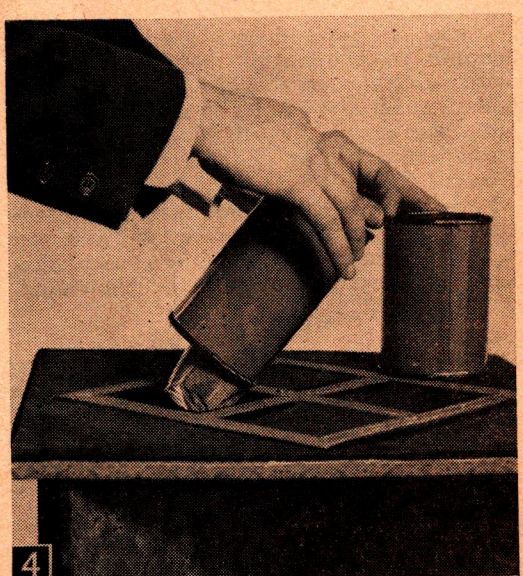
This simplest vanish procedure has a weakness in that people may suspect the silk is in the tube, even though they don't know how it got there. Disposal is simplified if you are working with a table having a secret well. As you put down the tube, hold it momentarily over the well and the fake will drop into it as in Fig. 4. Then, when you are questioned about the tube, you can pick it up and show it to be quite empty.

For More Deception, Use Two Tubes. In addition to the one you have already prepared, make an outer tube about 1 in. shorter and ½ in. wider in diameter. Place both tubes over the glass and silk as in Fig. 2C.

Remove the taller, inner tube first, taking the fake along with it, exactly as before. Let the fake drop into the well. This time, your audience does not yet realize the object has disappeared because the wider, shorter tube is still around the glass. The real surprise comes when you lift the second tube, show both tubes to be empty, and pass one through the other to prove it.

MATERIALS LIST—VANISHING MADE EASY

No. Req.	Size and Description
1	4" tall tapered glass with 2¼" dia. at mouth
1 pc.	6 x 12" clear plastic sheet (fake glass)
1	3" dia. x 5½" tin can or section of mailing tube (inner tube)
1	3½" dia. x 4½" tin can or section of mailing tube (outer tube)
Misc.	plastic cement, paint or paper to decorate tubes



4

Side view disclosing how magician disposes of the fake with its contents in well of magician's table. Left hand is about to pick up short tube revealing an empty glass.

The Vanishing Glass of Milk

★ **Small sheet of plastic and ordinary household materials will make up a bewildering bit of hocus-pocus art**

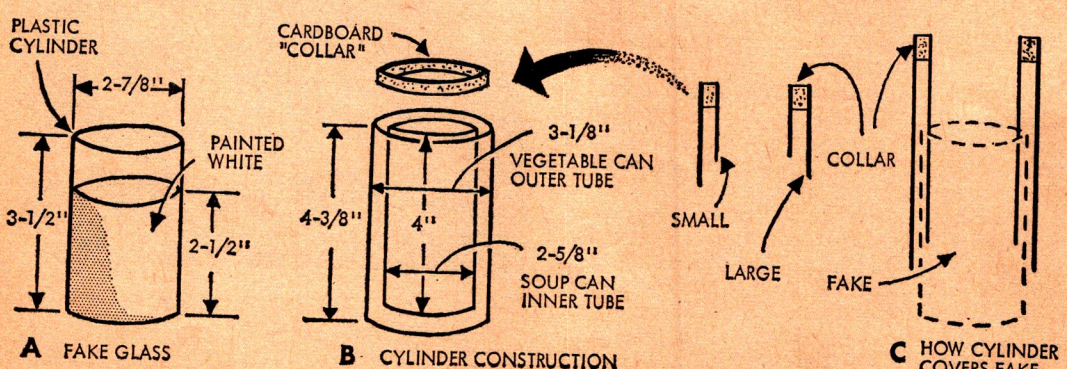
That's an uncanny can descending over the glass of milk, for when the lady magician lifts it, glass and milk will have disappeared in thin air.

YOU just can't believe your eyes when you see a glass of milk poured, placed on a tray, and covered, only to have both glass and milk disappear at the mention of a magic word. That's exactly what happens after the milk is concealed as in Fig. 1 and, moments later, the container is lifted. You can look through the hollow cylinder; not a single drop is left.

Several props are needed for this presentation, but if you are resourceful you can probably do a creditable job of constructing them in an evening out of materials on hand.

Start with a plain, straight-walled glass 3½ to 4 in. high. It's advisable to use one closer to 3½ in. high and with a diameter around 2¾ in. in order to take advantage of standard sizes for prop materials, as shown in Fig. 2.

Fit a sheet of transparent plastic—the thinner the better so long as it's rigid—around the glass, cut it to shape, and cement the joining ends together. Paint it white except for a rim about 1 in. wide around the top, so that from a short distance this "fake" will look like a real glass of milk (Fig. 2A).



2 DOUBLE CYLINDER TO FIT FAKE GLASS

3

Position of props is important while pouring milk into glass at start of trick. Tray and stand are placed to hide fake milk glass, which is never seen at same time as the real glass.

The fake does not need to be an exact match of the glass since they are never seen together. No one will detect the difference if they are fairly close in size and general appearance.

Make a Double-Walled Cylinder to slide down over the plastic fake, concealing it between walls. If you used dimensions suggested for the fake, you can make up the cylinder quickly with two common cans, one typically used for condensed soups and the other for canned vegetables. Cut out top and bottom ends cleanly with a can opener. Center the small can inside the larger one as in Fig. 2B, and glue in place to a collar built up of cardboard strip ½ to ¾ in. wide.

You can modify the cylinder as necessary to fit different size fakes. If cans of the proper size are not available, cut the cylinders out of a thin metal sheet or cardboard, joining edges with liquid solder or glue. The fit should be adequate to receive the fake, as in Fig. 2C. If desirable, the inner wall may be tapered slightly inward at the bottom to slip over the fake more easily.

Instead of rolling flat cardboard into tubes, you can cut sections from mailing tubes, provided they are of suitable diameters.

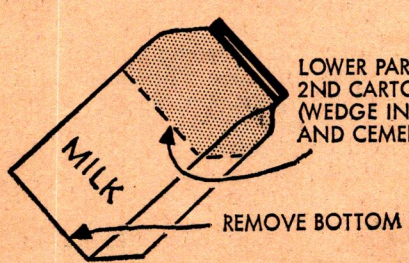
Cover the completed cylinder with a bright paper on the outside (Fig. 3), or paint it in a bright shade, and treat the inside to a darker color. To mask the thickness of the cylinder, you can put an ornamental binding around the top edge. If you do this, repeat along bottom edge, so that the binding will appear to be there solely for decorative purposes.

Prepare the Special Milk Carton from two empty half-gallon containers. Cut away the cardboard bottom of one and cut off the lower portion of the other about 2 in. from the bottom. Force the latter up the bottomless carton as far as it will go, then cement it tightly in place (Fig. 4). You can do a good sealing job here by pouring melted paraffin into all joints. When this is filled, milk pours from the modified carton as if it were an ordinary container.

Finally, procure a rectangular tray 12 in. or more in length and a small stand upon which to set it upright near the front of a table as in Figs. 3 and 5. In a pinch, you can easily fashion an easel from wire coat hangers.

Get ready for your performance by setting up on a small table which would make it seem reasonable enough to store the tray on end instead of flat. Place the real glass, cylinder, and milk carton anywhere in sight (Fig. 3), but be sure the fake glass is hidden by the tray. Pour more than enough milk into the carton to fill the glass and close the top.

Present the Great Milk Mystery by first picking up the real glass with the left hand and the carton with the right, then fill glass to the same level as the paint on the fake (Fig. 3). Turn to the table and announce



4 SPECIAL 1/2 GAL MILK CARTON

MATERIALS LIST—VANISHING GLASS OF MILK

No. Req.	Size and Description
1	8 oz. straight-walled glass approx. 3½" high (milk glass)
1 pc.	4 x 12" thin, rigid plastic sheet (glass fake)
1	3⅛" dia. x 4⅜" tin can (cylinder outer wall)
1	2⅝" dia. x 4" tin can (cylinder inner wall)
1 pc.	gift wrapping paper, bright design (cylinder cover)
1 pc.	½ x 24" ornamental tape (cylinder edge binding)
2	½-gal. waxed paper milk cartons (special container)
1	10 x 14" decorative tray
1	upright tray holder (fashion easel from coat hanger wire or use plastic napkin holder)
Misc.	plastic cement, flat paints (off-white to resemble milk, dark shade for inside of cylinder), scrap cardboard for cylinder collar, glue, paraffin, 10 oz. milk or milk diluted with water

Private side view for magicians only shows importance of timing. While the two motions are simultaneous, delay lifting tray a split second until certain that audience will not be able to see carton hiding the real milk glass.

Thin white cardboard being inserted into plastic fake is a substitute for paint to simulate milk. Bottom of double cylinder on table is never shown to the audience.

you will place the glass of milk upon the tray.

In order to pick up the tray, set the glass of milk down behind it and near the fake, then reach for the upper edge of tray with the same (left) hand. At the same time, place the carton on the table behind the tray and *over the real milk glass,* being doubly sure to raise the carton high enough so that there's no danger of hitting the glass and spilling the milk.

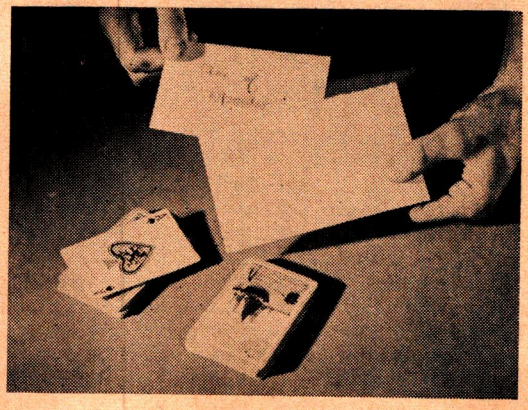
While lowering the carton, lift the tray with your left hand as in Fig. 5. The audience will now see the fake glass standing near the container, but will naturally assume it is the original glass. When you can make this switch successfully, after a few rehearsals, the rest of the trick is "in the bag."

Now you can go into a real spiel on the wonderful powers of magic as you pick up the fake with your right hand and set it on the tray with a "careful flourish." Since your left is holding the tray, use your right once more to pick up the decorated cylinder and place it over the "glass of milk" as in Fig. 1. The fake is now wholly within the walls of the cylinder.

After a bit of hocus-pocus, say your magic word and lift the cylinder, squeezing it tightly to hold the plastic fake between the walls. Turn the top of the cylinder toward the audience so that they can see through it. Milk and glass have vanished completely.

Lay the tray aside or place it on the table by the "empty" cylinder.

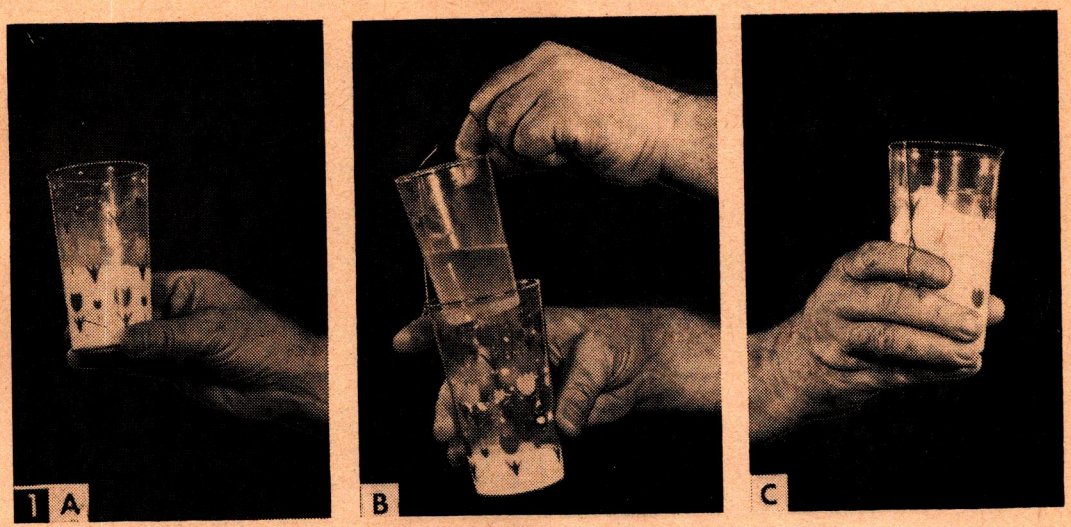
Card Sharp



• Write the name of a card on a slip of paper and seal it in an envelope. Then ask a friend to shuffle and cut a pack of cards, placing both piles face downward on the table. Lay the envelope on one pile, with the rest of the deck on top of it. Have someone open the envelope after first looking at the card directly under it. The name of the card will appear on the slip of paper. If you value your life, don't tell anyone that this card was removed from the deck and concealed under the envelope.

The Magical Way of Evaporating Milk

★ **Milk is made to disappear and reappear with a mere wave of the hand**



Left, audience view. Milk rises and falls in a glass, at the magician's command. Center, the secret: an inner glass partly filled with water, and looped thread attached. Let down into glass containing only ½ in. of milk, inner glass acts as plunger. Right, rear view (away from audience) shows finger in loop of thread behind glass.

WHILE this is not likely to be employed as a commercial method of evaporating milk—it's not on a large enough scale for Carnation—it should make an impression on your bewitched audience. Few observers (if any) will guess the trick behind this baffler.

The magician holds a tall glass of milk in his right hand. He pretends to draw the milk upward with his left by clutching his fist above the glass. Gradually, the milk gets lower and lower until it is almost gone.

Then, with a throwing action, the magician tosses the evaporated milk back into the glass. Steadily—or in spurts, if preferred—it rises to its original level. The milk can be made to go and come back as often as desired.

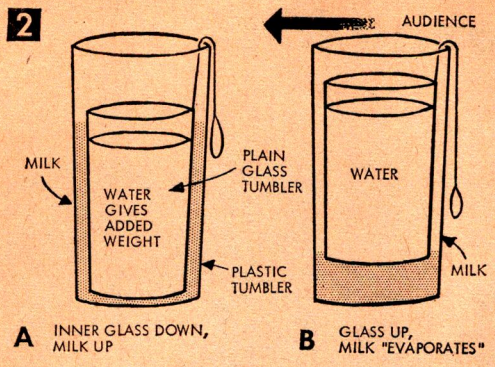
A Double Glass is required, but it can easily be prepared from two glasses of the proper sizes (Fig. 2). For the larger glass, a simple plastic tumbler 4¾ in. tall with a rim diameter of 2¾ in. is suitable; the smaller should be a plain glass tumbler 3⅝ in. tall with a rim diameter of 2⅛ in. You may experiment with other sizes.

Attach a piece of strong white thread to the rim of the smaller glass. The best method is to drill a hole and put the thread through, knotting it above the glass rim. A simpler and usually satisfactory method is to make a band of thin plastic, about ½ in. wide, just large enough in diameter to fit around the smaller glass immediately below the rim; the thread can be tied around the plastic band. The thread could even be threaded on a needle, pushed through a short piece of cellophane tape, and then tied around it. The tape is fixed to the rim of the smaller glass. This should last through a performance of the trick.

Test the Glasses by pouring a small quantity of milk into the large plastic tumbler, only ½ in. or so. Place the small glass in the larger one and push it down like a plunger. This causes the milk to come up between the glasses, so that the larger tumbler—the only one that the audience knows about—seems to fill (Fig. 2A). There should be just enough milk in the larger tumbler to come up almost to the rim of the smaller glass when the latter is plunged all the way down.

Pour water into the small inner tumbler to give it enough weight to go down. It is for this reason that the inner tumbler should be of glass, not plastic, as glass gives it enough weight so it doesn't have to be overfilled with water. A plastic tumbler may work, however. This can only be determined by experiment. Hang the thread attached to the inner glass over the rim of the outer glass, and tie it into a small loop to receive one or two fingers. All is now ready for the trick to be performed.

Performing the Trick. Pick up the glass and show it well-filled with milk (which comes almost up to the rim of the hidden inner glass). Engage the loop of thread with



MATERIALS LIST—EVAPORATING MILK

No. Req.	Size and Description
1	plastic tumbler, 4¾" tall, 2¾" rim dia.
1	glass tumbler, 3⅝" tall, 2⅛" rim dia.
1	½" wide thin plastic band (or cellophane tape. (See text.)
Misc.	strong white thread, milk, water

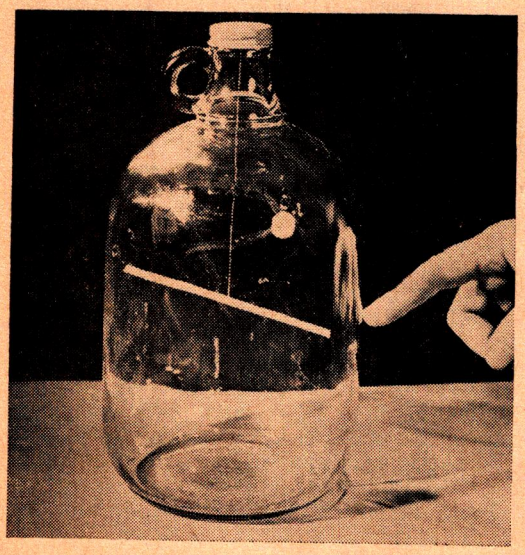
the right finger—or fingers—in back of the glass. While pretending to snatch milk with the left hand, draw the loop down with the right. This lifts the inner glass and lowers the level of the milk between the two glasses, so that the milk appears to dwindle (Fig. 2B). The inner glass remains unseen, however, because it is plain and is filled only with water. Any design on the outer plastic tumbler helps to keep the inner glass hidden.

To bring the milk back, simply relax pressure on the thread, and the inner glass will sink down again, causing the milk to rise.

You may wish to finish the trick by pouring the milk into another tall glass. In doing this, tilt the trick glass sideways, so that the audience cannot look into the mouth. You must also extend your forefinger down into the glass to keep the inner tumbler from falling out. The milk pours from between the two tumblers and the water pours from the inner tumbler, mixing with the milk, so that the contents should look like milk after the pouring is done.

You had better experiment with this last part of the trick. If the mixture of milk and water is not white enough to be convincing, finish the trick by merely setting the glass aside, still apparently filled with milk.

The Floating Straw



• Suspended in a large bottle, a common drinking straw will follow your finger—as if by magic—if you first charge yourself electrically by rubbing your feet on the carpet. This stunt works best on a dry day, and is improved by leaving the bottle open in a warm place for some time before using it. Suspend the straw from the cap by a single strand untwisted from a piece of thread. Move your finger around the bottle without touching it. This will be more mystifying if you *do not* lead up to it with other static feats.

What Brand?

• Have several of your friends each lend you a cigarette, all of different brands. Then have yourself blindfolded and have the cigarettes passed to you by an assistant who calls the name of each as he hands it over and you drop it into a bowl. Have them stirred to mix them, then have your assistant call out the brand of one. You can pick it without fail. Prearrange with your assistant the brand he will ask you to pick, and when he hands that cigarette to you squeeze it just enough so that you can tell it later by feel.

How to Change a

Small Silk to Full-Size Egg

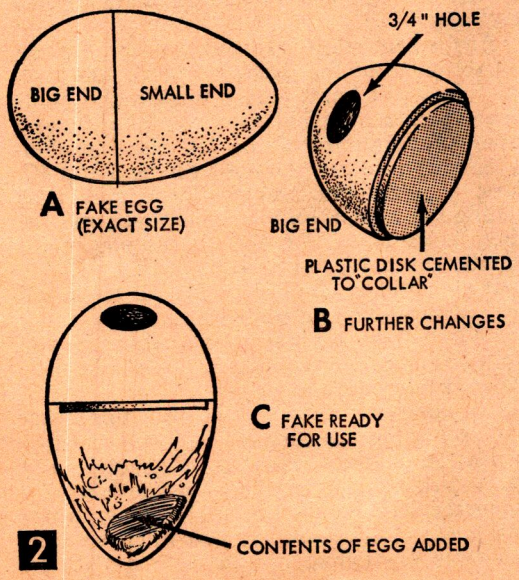
★ Crack it open for "Doubting Thomases" and pour out the oily contents

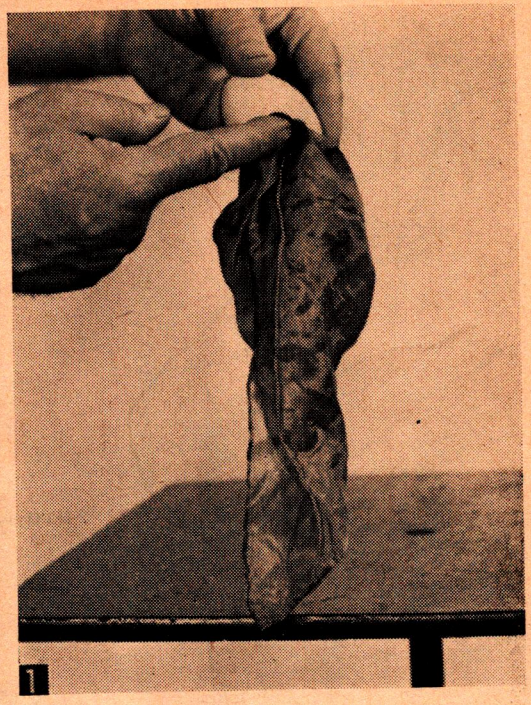
YOU have probably watched a magician work a silk handkerchief between his hands and finally poke it into a fist, only to have it vanish completely or change into something else. Here you have a double surprise to offer: first, the silk becomes an egg and second, the egg is broken and its liquid contents dropped into a glass just to show that it is "real."

The trick depends upon a special plastic egg that opens at the middle like a small box. Called *Fill 'n' Thrill* eggs, because they can be filled with tiny candies and used as party favors, they are made by the Peoria Plastic Co., East Peoria, Ill., and sold at novelty and chain stores.

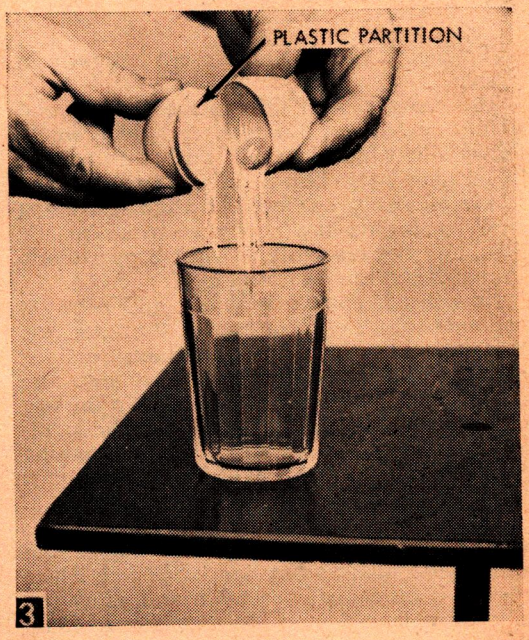
Modify the Egg Further by cutting a ¾-in.-dia. hole through the shell near its big end, as in Fig. 2A. You can make this by starting the hole with a ¼-in. drill, locating the full diameter around it with a pencil, and then enlarging the hole by carefully whittling out to the mark with a sharp utility knife or a model maker's knife.

Cut a disk from thin, stiff plastic to fit across the mouth of the big end of the egg

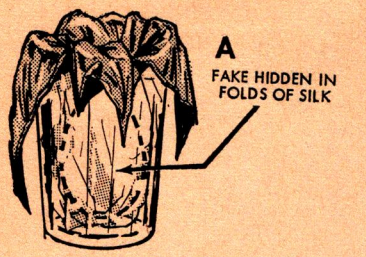


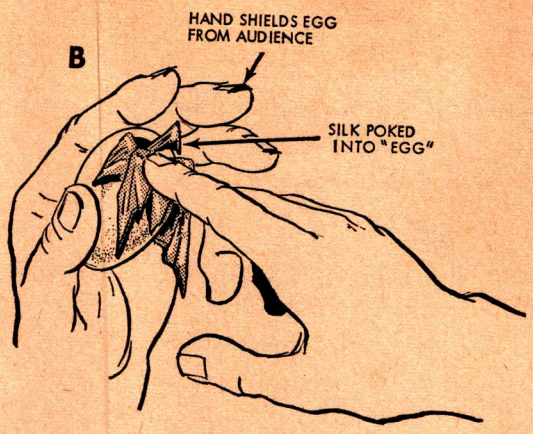


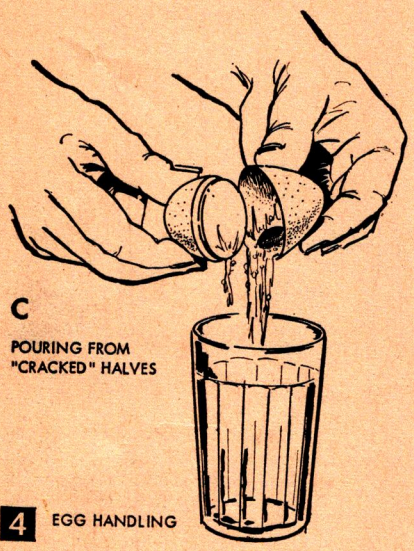
Little does the audience suspect you have an egg concealed in your hand until all the silk has disappeared and hand turns to reveal it.

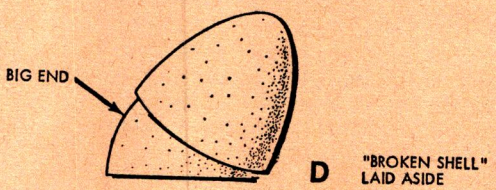


Back view of the fake egg at moment of pouring contents from the halves into a glass. Halves of "cracked" egg are opened in direction away from audience so that partition will not be seen.









4 EGG HANDLING

MATERIALS LIST—SILK INTO EGG

No. Req.	Size and Description
1	plastic two-piece egg such as Fill 'n' Thrill (fake), available in novelty and chain stores
1	small silk handkerchief
1 pc.	2 x 2" thin plastic sheet or heavy plastic film (disk for egg partition), available at hobby shops and hardware stores
Misc.	plastic cement, paint to resemble egg hue, real egg

as in Figs. 2B and 3 and cement it tightly in place.

The compartment thus formed in this end of the egg is large enough to hold a small, flimsy silk which you will push through the ¾-in. hole later. You need make no changes in the other egg section. Paint the entire egg shell, including the newly attached plastic disk, in a flat off-white or light brown shade to match the hue of a real egg.

Now crack open a real egg and pour its contents into the small end of the fake egg. Keeping this end down, join both portions of the fake down and nestle it into the center of the silk handkerchief. Keep the egg concealed within the folds and stuff the handkerchief loosely into an ordinary drinking glass (Fig. 4A). There will be no leakage if you remember to keep the egg upright.

Exit Silk, Enter Egg. The presentation is short and sweet, actually over before the audience realizes what has happened. Place the glass on a stand or table and draw the silk from it, bringing the egg along. Keep your hands wrapped sufficiently around the silk so that the egg cannot be seen. Work the silk into the egg hole near the top while continuing to shield the egg from view. Poke the last bit of the handkerchief into the egg with the right forefinger as in Figs. 1 and 4B, then put the right thumb over the hole and sweep the hands apart to display the egg.

If you are building up to the climax vocally as well as visually, this is the point to proclaim, "—and the silk has magically transformed itself into an egg!" Pause a moment or two for effect, then add emphatically, "a real egg!"

At the same time, pretend to crack the egg on the edge of the glass, but keep the back of your right hand partly toward the audience. Separate the halves of the fake egg and pour the contents of the left hand portion (big end) into the glass as in Figs. 3 and 4C. Nest the big end into the little end, thus hiding the hole, then turn them over and lay them aside as in Fig. 4D, just as you might handle the halves of a real eggshell.

If you prefer, you can partly fill the small end of the fake egg with water and a small yellow ball to represent egg albumen and yolk. This combination will look authentic when it falls into the glass.

An alternate way to perform this trick calls for a fake egg made of plastic or cardboard. The halves are cemented together and the entire interior is free to accommodate a fair-sized silk handkerchief. However, to use this method successfully, you must be proficient in "switching" the fake for a real egg.

The Breakaway Vanishing Box

★ **Put a skunk, rabbit, or other small animal in it and he'll do a quick disappearing act while you tear the box apart**

And that's the last of the box. But where did the little skunk go?

PERHAPS you've watched a magician vanish a rabbit or some other object, and although you thought you knew where it went, he fooled you at the finish. That's what puts the fun in magic, whether you are watching or doing. As for building, if you follow the plans given here, you can make a bunny box that will prove a real fooler. The construction, while not difficult, is somewhat tricky.

The box should be square-shaped, stand 5 or 6 in. high, and have a flat top and bottom. When placed on a low folding table, every one can see beneath it. The magician introduces a bunny, a pet skunk, or a stuffed facsimile as in Fig. 4 and places it within the box.

He then dismantles the box, removing top, and bottom, which he hands to his assistant. He shows the empty box, but its double bottom covered with paper rouses the suspicion of the audience. So for an astonishing finish, he punches his fist through the paper as in Fig. 1, showing that it covers nothing but an empty frame. The skunk is gone.

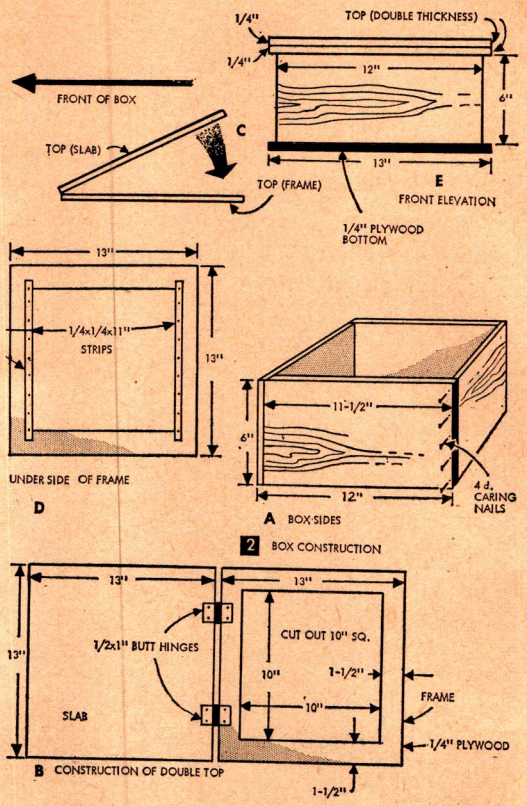
Construct the Box Body out of ½-in. pine or ½-in. lumber core plywood to a height of about 6 in. as in Fig. 2A. Cut three 13-in. squares out of ¼-in. plywood, one for the bottom and two for the hinged top, neither of which is attached to the sides. Cut a 10-in. square out of the center of one of the 13-in. squares as in Fig. 2B to form a frame with 1½-in. sides. Put aside the cutout for later use. Assemble the top by attaching this frame to the other 13-in. square with ½ x 1-in. butt hinges intended for ¼-in. stock as in Fig. 2B and C.

Cut two 11-in. lengths of ¼ x ¼-in. stop strip and attach them to the underside of the frame (Fig. 2D). Since they will be subjected to some strain during a performance, glue them to the frame, then nail through from the cleat side with ¾-in. brads. Turn frame over and bend over projecting nail points with your hammer. Drive flush into the plywood.

Paint the inside and side edges of the box black, as well as both sides of the bottom and the frame portion of the top. For the top slab and outside of the box, you may prefer a bright shade of paint and further decorate them with appropriate oriental decals as in Figs. 1 and 4.

An Elaborate Special Bag is made up for the fake. Cut a piece of *Flannelette* or *Indian Head* or similar cloth, approximately 12 x 15 in. Trim the holdover 10 x 10-in. plywood cutout to 9 x 9 in. Attach the cloth to this plywood slab as in Fig. 3A and B, turning cloth about 1 in. around the sides. Glue and tack in place. After pleating the bag at the bottom, turn about 1 in. of the cloth around the plywood bottom edge, then glue and tack in place. Hem the top and in it insert a narrow elastic band just long enough to hold the top loosely shut.

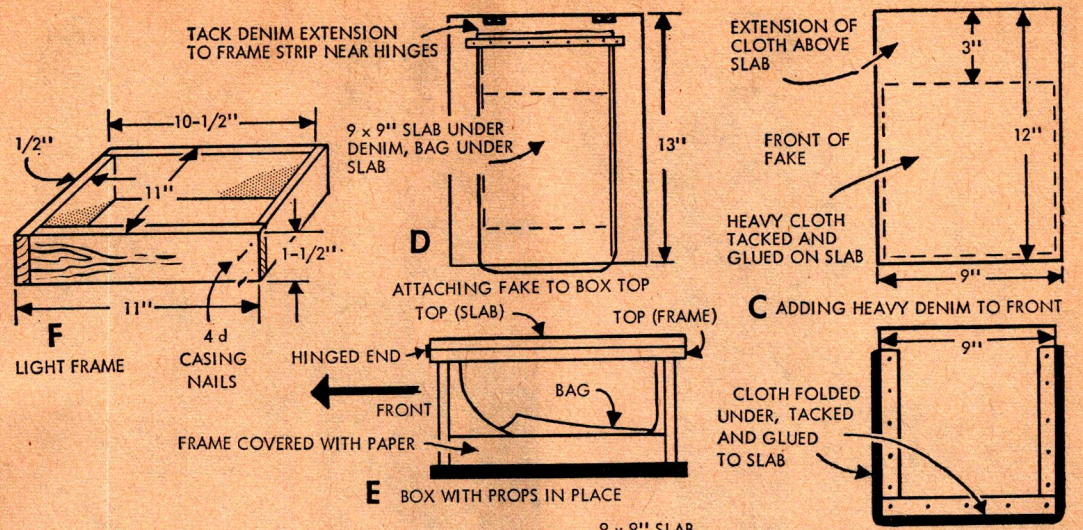
The side where the edges are tacked is the front of the fake. It should be covered with a strip of heavier cloth such as denim. Cut an 11 x 14-in. piece, then turn in and hem all sides 1 in., reducing overall size to 9 x 12 in. Glue and tack this piece to front of the fake (Fig. 3C), over the tacked edges of the cloth bag, allowing a 3-in. extension of the denim above the plywood.



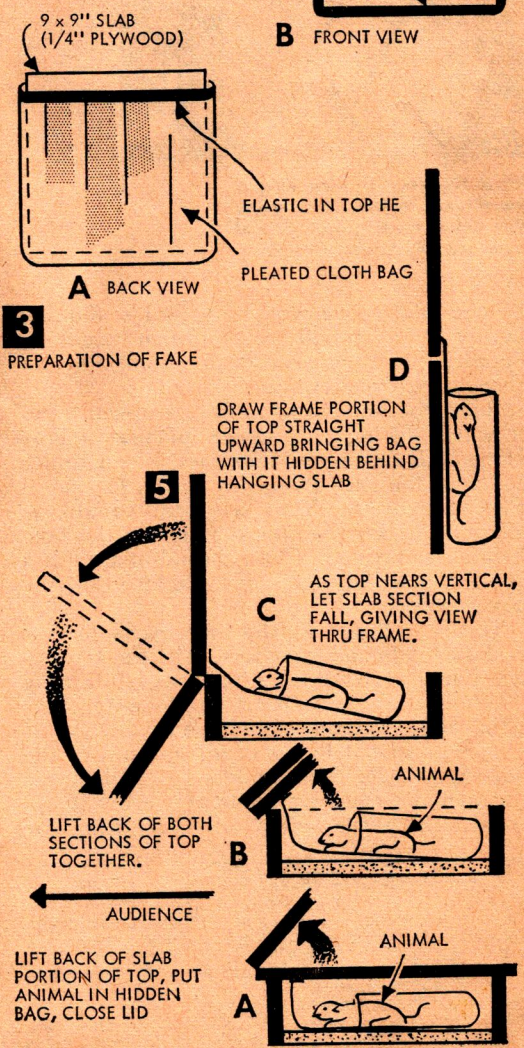
Now lay this plywood square, bag side underneath, on the frame of the top and tack the extended end of the denim to the ¼-in. wood strip nearest the hinges as in Fig. 3D.

This completes assembly of the fake and hinged cover. When cover is placed on the box, the slab should be on top and hinges toward the front. The 3-in. extension of the denim allows the cloth bag attached to the small plywood slab to lie nearly horizontal inside the box as in Fig. 3E. This position is possible because it rests on one more prop, a 1½-in. thick, paper-covered frame.

You should have enough of the ½-in. stock used to make the box sides left over to cut four 1½ x 10½-in. strips. If not, you can cut four strips of this length out of a length of ordinary 1 x 2 furring strip—actually ¾ x 1⅝ in.—since other dimensions are not too critical. Nail the pieces together to make a light, square frame as in Fig. 3F, then cover both



Upper portion of cover in raised position as animal is placed inside the box. Actually it goes right into a bag attached to frame section of the lid.



sides of the frame by tacking on a few sheets of newspaper. Place this frame on the bottom of the box, where it will fit loosely and act as a rest for the bag fake. Put the box on a snack stand or similar folding table and you are ready to confound your audience.

Introduce Your Animal. Though it can

When top frame is lifted, hinged panel is allowed to fall forward, thus hiding the bag from view of audience, which is to the right.

Bag is out of sight below dropped panel held by girl assistant. Magician has picked up box and is handing the loose bottom to the assistant, who will now walk off naturally with the evidence, while the audience is suspicious of false paper bottom in box.

be the real thing, you may find a dummy bunny or a stuffed skunk much easier to handle. Most magical dealers and novelty shops offer excellent imitations.

Raise the box lid by tilting it upward and forward, lifting the upper portion (slab) alone. Lift the animal into the box and, under cover of the raised lid, put in the bag as in Figs. 4 and 5A. Your assistant should be standing by on the opposite side of the box, helping as needed. Close the lid and, with a great flourish of your hand, declare that the box is empty.

To prove this, take the box apart—in several stages for added effect. Tilt the top upward and forward as before, but this time lift both slab and frame sections together (Fig. 5B). Let the slab fall forward on its hinges so that it hangs down in front of the box (Fig. 5C). The audience will then see through the open frame as you draw it upward. The same action will also bring the bag out of the box, but this will remain hidden by the slab hanging down from the frame (Figs. 6 and 5D).

The Box Is Now Really Empty. Hand the frame to your assistant, who should transfer it from one hand to the other, being careful to keep the same side facing the audience so the bag will remain hidden. Pick up the box and tilt it forward on one arm as in Fig. 7 so that you can pick up the bottom with your other hand and pass it over to the assistant.

This action reveals the false paper bottom in the box. Show it inside and outside, finally taking the paper-covered frame completely from the box. Slide the box over your arm, proving it empty. By now, everybody will be suspicious of the frame, as it is covered with newspaper on each side, with a wide space in between.

After building up that suspicion, punch your hand through the frame, breaking the paper on both sides and revealing that nothing is there (Fig. 1).

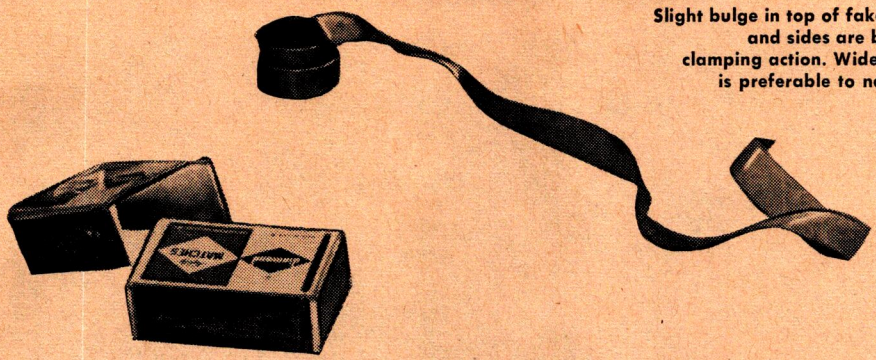
The assistant should immediately walk off with the top and bottom of the box, holding it so that the hanging bag cannot be seen. After putting that out of sight she should return for the box and frame, taking those away as soon as you are finished with them. Often, she will have time to walk off with the top and bottom while you are still busy with the remainder of the box.

MATERIALS LIST—BREAKAWAY VANISHING BOX

No. Req.	Size and Description
1 pc.	½ x 7½ x 48″ pine or ½ x 12 x 36″ plywood (box, frame)
1 pc.	¼ x 13 x 48″ plywood (slab and frame top, bottom)
1 pc.	¼ x ¼ x 24″ stop strip (top frame cleats)
1 pc.	12 x 15″ *Flannelette* or *Indian Head* cloth (bag for fake)
1 pc.	11 x 14″ heavy denim
1 pr.	½ x 1″ butt hinges for ¼-in. stock
Misc.	black and red paint, glue, ¼″ tacks, 4d casing nails, oriental decals for box top and sides, newspaper, folding snack table

Matchbox and Ribbon Mystery

★ **A construction quickie for a simple but effective illusion**



Slight bulge in top of fake cover is intentional and sides are bent inward a bit for clamping action. Wide, flat ribbon at right is preferable to narrow, thicker types.

SIMPLE items are used in this trick: a box of safety matches, a narrow ribbon attached to a needle or bodkin, and a plain handkerchief. After the ribbon is threaded through the matchbox between the drawer and the cover two members of the audience are invited to hold the ends.

The magician throws the handkerchief over the dangling matchbox, reaches beneath it and brings out the box completely free of the ribbon. At the same time he takes away the handkerchief. Matchbox and ribbon are left for the audience to examine.

Use a Special Fake as in Fig. 6 made by cutting a piece of thin aluminum and bending it to fit over a matchbox as in Fig. 2A and B. The fake should bulge very slightly at the top so there will be a space between it and the box. The sides should pinch inward to assure a firm grip.

Glue blue paper to outside of the fake and under the edges. Soak the label and striking surfaces from an extra matchbox, let dry, then glue them to the fake. Clamp this fake over the box you intend using to form a "shell" that looks like the actual cover.

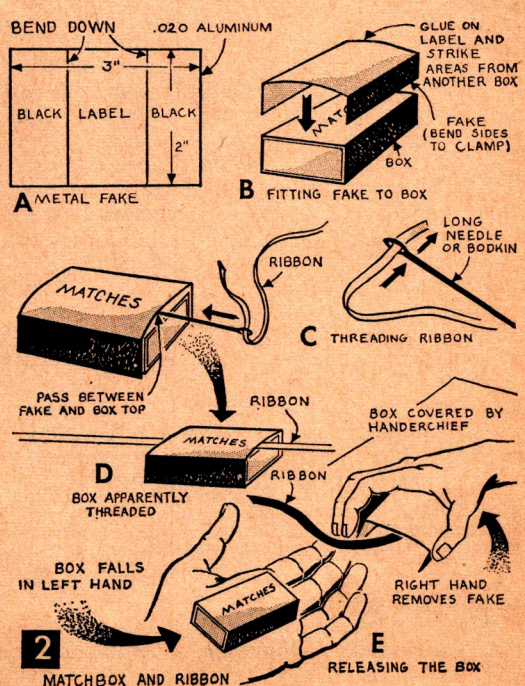
Begin performing by showing the matchbox, opening it slightly, and pretending to thread the ribbon between the top of the box and drawer. Actually, push the needle through between the top of the box and the fake (Fig. 2C). The longer the needle and the flatter the ribbon, the easier it will be to do this. After threading, remove the needle and call for two volunteers to hold the ribbon ends. (Fig. 2D)

Now spread the handkerchief over the dangling matchbox. Reach beneath and grasp the ends of the box with the left hand. At the same time, cup the fingers of your right hand around the fake and pull the two apart. Bring the box out with your left hand and take away the handkerchief with your right, still holding the fake beneath the handkerchief.

While the matchbox and the ribbon are being examined, drop the fake into the pocket or put it there with the handkerchief. If working with full show equipment, you can lay the handkerchief on a magician's table and drop the fake into a well.

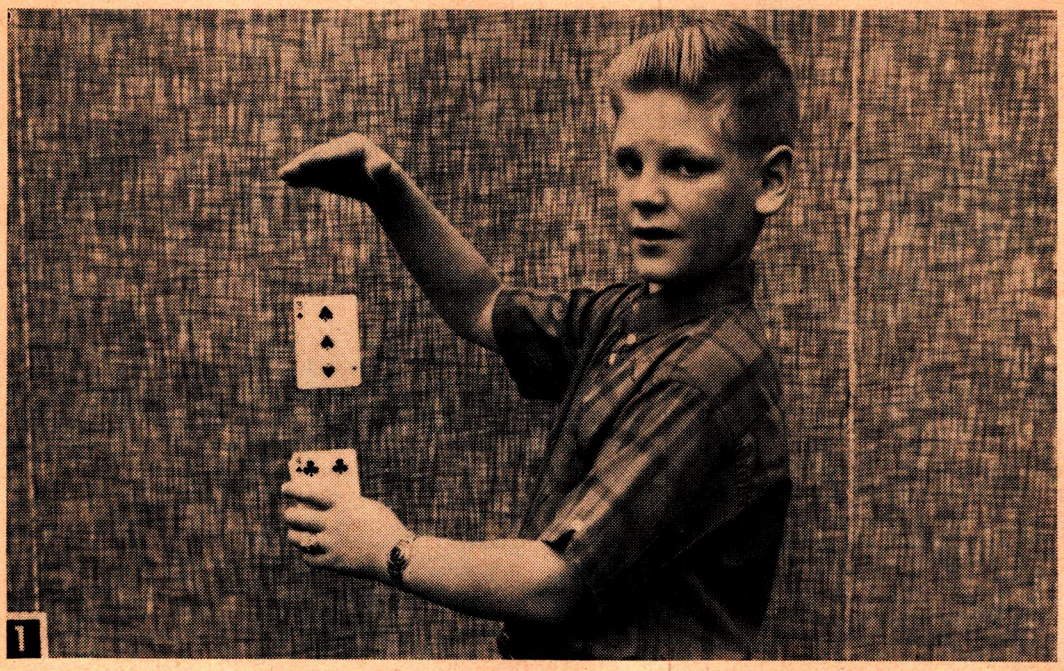
MATERIALS LIST—MATCHBOX AND RIBBON

No. Req.	Size and Description
1 pc.	2 x 3 x .020" gage aluminum (cover fake)
2 boxes	safety matches
1 pkg.	¾" wide plain colored ribbon (8-10' long)
1	bodkin or long needle
1 pc.	2 x 4" blue paper
1	plain men's handkerchief



How to perform Thurston's Rising Card Trick

★ **Cards mysteriously rise and float through the air in response to commands**



The rising card trick being performed against a background designed to conceal the all-powerful thread. Magician is William M. Radner, son of the famous escapologist.

HOWARD THURSTON, America's leading magician of the 1920s, gained his start to fame and fortune with a vaudeville act in which he featured a new version of the rising card trick. Until then, magicians had had cards come up part way from the pack, each being removed as it neared the top. But Thurston had the chosen cards come all the way from the pack to his waiting hand, some 2 or 3 ft. above. Thurston's cards actually rose gracefully and magically in mid-air, leaving the audience both baffled and impressed.

Early in his career, Thurston gave a special showing of this trick for Leon Herrmann, nephew and successor of the famous Herrmann the Great, once America's number one magician. Leon was fooled by the new rising cards, and Thurston promptly billed himself as "The Man Who Mystified Herrmann," which helped him reach the big time. After his show grew to mammoth proportions, including such huge illusions as the "Appearing Lion" and the "Vanishing Automobile," Thurston still featured the "Rising Cards" and made a great act out of it.

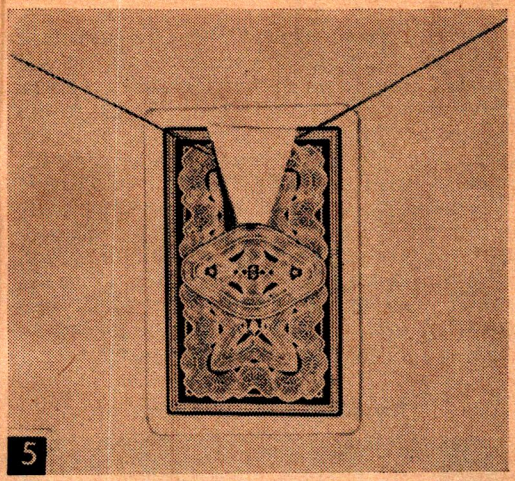
While the trick requires a special setup for the stage, involving the aid of assistants, it can easily be adapted to platform or even home presentation, as a one-man operation.

A Long Thread of thin black silk, running from wall to wall is the first requirement. On a platform, the thread can sometimes be run from one wing to the other. In a large room, it can run between opposite walls, near one end; in a small room, the magician can work in a corner and can rig the thread accordingly.

The thread should run a few inches above head level, so you can walk under it. One end is simply tied to a large tack or small nail which is driven into the wall; the other end passes through a screw-eye and continues down almost to the floor, where a fishing sinker is tied to the end, keeping the thread taut (Fig. 2).

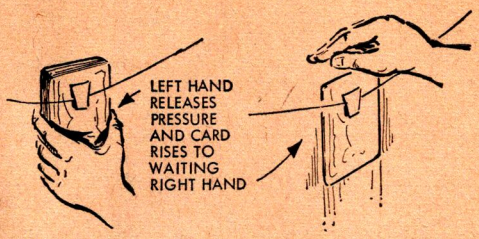
A bookcase, hanging drape, or even the edge of a picture frame can be used to hide the screw-eye. Tall screens may be used as "wings" for an improvised stage, or a divided curtain can be hung from a rope in front of the thread. It is simply a matter of keeping the "hook-up" unnoticed, and having a background sufficiently dark or variegated so the thread cannot be seen (Fig. 1).

You will need five special playing cards, which are easily prepared. From odd cards —like jokers—cut triangular tabs, measuring



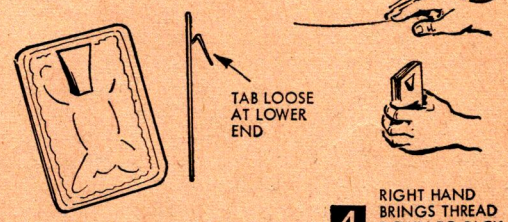
5

The thread is slipped beneath the point of the tab on the back of the card, and the rise is ready to begin.



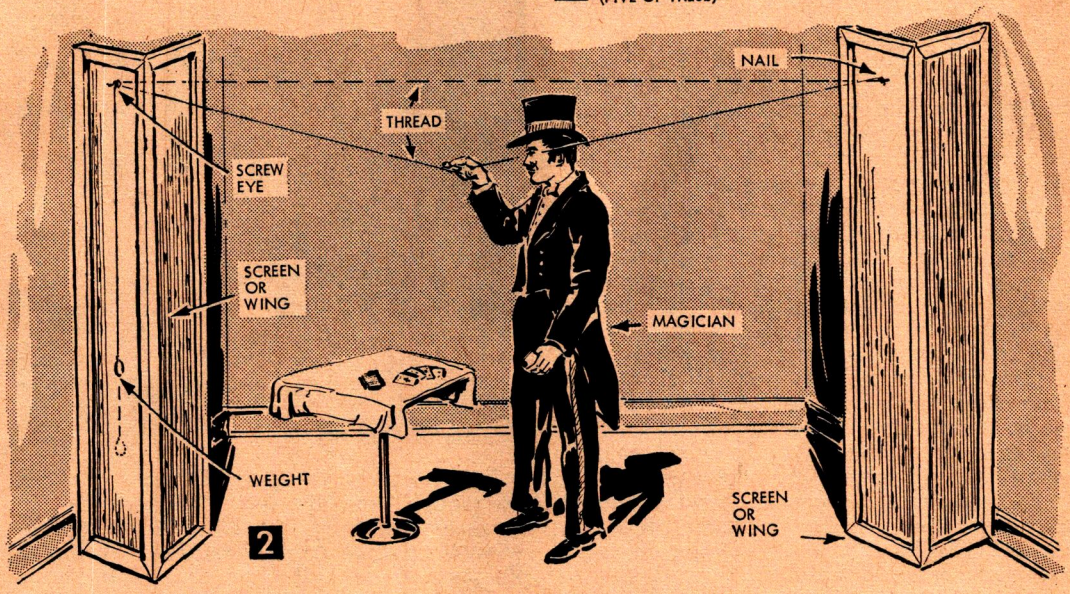
6 A THREAD ENGAGES TAB

B



3 SPECIAL CARD WITH TAB ON BACK (FIVE OF THESE)

4 RIGHT HAND BRINGS THREAD DOWN TO PACK IN LEFT



2

1 in. to a side, and paste one near the top edge on the back of each special card. Only the top portion of each tab is pasted, the point being downward, and loose (Fig. 3).

The five special cards—say the Jack and Ace of clubs, 2 of diamonds, 8 and Queen of hearts—are placed face upward on the table. In front of them (toward the audience) put the card case. On the case set a face-down pack of cards, made up of duplicates of your prepared cards, in the rotation J C - 8 H - A C - 2 D - Q H, repeated throughout, with a few odd cards at the bottom. These cards have no tabs; they compose what is called a "five-card forcing pack" and since it contains nine or 10 duplicates of each card, it requires that many extra packs to make it up.

Performing the Trick. Start by picking up the forcing pack and walking forward while you spread the pack face down, inviting a spectator to touch any card he wants. Have him remove that card and the next four, either above or below it, and distribute them among other persons. Due to the rotation, any cluster of five cards will match your set with the tabs. Have the chosen cards pushed singly into different parts of the pack, and return to the table.

Lay the pack *face up* on the set of prepared "tab" cards, then pick up the card case and lay it aside. Pick up the pack, the special cards with it. Hold the pack upright in the left hand, with the "odd" bottom card facing the audience. Be sure that the tab ends of

MATERIALS LIST—RISING CARD

No. Req.	Size and Description
1	"5-card forcing pack" made up of five chosen cards repeated 9 or 10 times, and a few odd cards
1	3-oz. fishing sinker
Misc.	thin black silk thread, nail, screw eye, glue

your special cards are toward the top, in back.

Stand just in back of the thread. Raise your right hand above the pack and call for a card to rise. When none respond, bring your hand down, snap your fingers and raise the hand again. This time, go higher and engage the thread with your fingers, bringing it down to the pack (Fig. 4). This time, square the cards and tap them. In so doing, your right thumb works the thread beneath the point of the tab on the top or back card of the pack (Fig. 5). The left hand grips the pack, fingers in front, thumb at back, while the right hand goes up and makes another finger snap.

Now the left hand relaxes pressure (Fig. 5A) and the card sails up to the right hand (Fig. 5B), the sinker providing the motive power by hauling the end of the thread downward. The right hand deliberately brings the card down and sets it at the front of the pack, where it is retained by the left forefinger, so that it projects above the rest, while the chooser identifies the card.

The right hand disengages the thread and hooks it beneath the tab of the card now on the back of the pack, then pushes down the card at the front and is raised above the pack again. Another command: the left thumb eases pressure, and the second card does a rise to the right hand.

Continue the process until all five cards have risen, and when the last card is brought down, simply detach the thread and let it go up and out of the way. The final card is identified, and you lay the pack aside.

Experiment will show the proper amount of weight for an effective rise. Since the weight must be at one side, making the cards rise at an angle in that direction, it is best to have it at the right, making the slant less noticeable, as the cards come toward the right hand. With a long thread, you can work closer to the right wall or wing, thus bringing the thread down at a sharper angle and making the rise more vertical.

Note: In making up a "forcing pack" it is possible to use Pinochle packs—which have two of each card—so that with only five packs you can form the necessary sets.

When Working with an Assistant, a forcing pack is not needed. Instead, an entire pack of "tab" cards is prepared and is laid out on a table, according to suits and values. This is offstage, and the assistant waits there, with a tray on which he has an ordinary pack of cards in its case.

The magician asks people to call the names of cards and, as he repeats them, the assistant picks out the proper tab cards and lays them in a face-up pile on the tray, close to the rim where they will not be seen. He brings the tray on, and the magician takes the ordinary pack from its case and shuffles it, taking care to finish with an "odd" card on the front.

He then lays the pack face up on the tray, on top of the tab cards. He picks up the card case from the table, drops it on the tray and takes the pack again, this time picking up the special cards as well. The chosen cards then rise from the pack, which is later placed on the tray and carried off by the assistant.

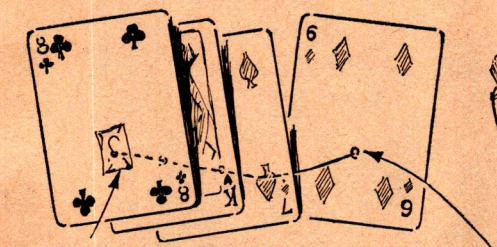
An Alliance of Kings

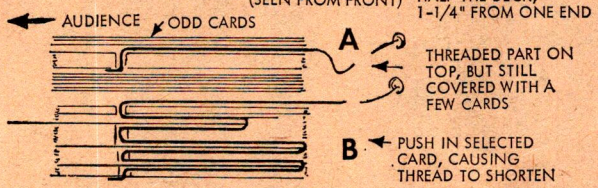
• These four kings always turn up together, no matter how distributed—if you do the necessary stacking. Exhibit four kings fanwise, then place them, face down, on top of the pack. Take up the top card, show it to be a king, and place it on the bottom of the deck; take off the next two, one at a time, and insert them anywhere in the pack. Have someone cut the pack and put it back together. Look through the deck and show all four kings to be together again.

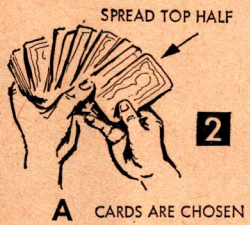
Behind the second king from the rear (in the fan) were secreted two other court cards. They won't show if you hold the fan carefully when exhibiting it. Be careful, also, not to let your audience see the extra kings in the deck at the climax of the trick. The effect trick could be heightened by permitting the audience to look through the deck before the trick begins, while you are holding the kings, to show them that there are no extra kings in the pack at that point.

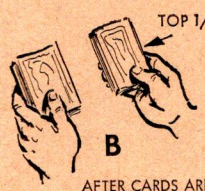
Close-up Rising Cards

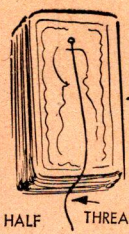
★ **An ingenious substitute for Thurston's more elaborate version, if conditions restrict**

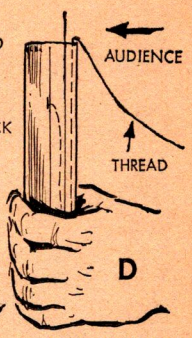


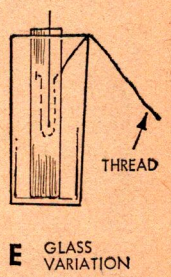












MAKING cards rise out of the pack is always impressive, no matter how it's done, so if you haven't the facilities or space to do it Thurston's way—described on the previous pages—here's a simple, very effective version you can perform almost within reach of the persons who select the cards.

The magician spreads a pack of cards and lets two or three people draw cards from it. Then he pushes the cards back into the pack as he holds it tilted upward. One by one, the chosen cards come forth from the pack.

A Special Deck Is Needed. To prepare it, punch a ⅛-in. hole in half of the cards, exactly 1¼ in. from one end and midway between the sides. If you do not have a ⅛-in. punch, the ¼-in. size will do; the important thing is to have the holes line up exactly.

Run a black thread through the holes from back to front. Coil the front end slightly and attach it to the top-threaded card with a small square of cellulose tape as in Fig. 1. Arrange this group of cards so that the threaded end is toward you. On top, place the remainder of the pack, consisting of the ordinary cards. Attach the loose end of the thread to a belt strap or a coat button.

Allow about 18 in. of thread for a three-card rise; about 12 in. if only two cards are to emerge. The thread gives sufficient leeway for you to place the pack in your inside coat pocket until needed, which is a very nice feature of the trick.

In the Beginning, bring out the pack, extend it, and let up to three persons take a card as you spread them (Fig. 2A). Be careful, however, only to spread the upper half, so that no one can take a card from the threaded section. While the volunteers are looking at their cards, move about half of the cards from the top of the pack to the bottom, so that the threaded portion is on top (Figs. 1A and 2B), but is still covered by a few of the unstrung cards. Also turn the pack around so that the threaded end is *toward* the audience (Fig. 2C).

Now, take one chosen card and push it into the pack just above the center. Since this enters the threaded section, you will shorten the thread as the card is fully inserted (Fig. 1B). Push the next card in a little bit above that and then the final card, still closer to the top of the pack. This takes up most of the slack, but all is now ready for the rise.

You have a choice of two variations, both equally simple. In one, hold the pack upright in the left hand (Fig. 2D), which is cupped around the lower half of the pack. As you move the hand forward, an action which takes up the slack in the thread, the cards will rise in an impressive manner, one after the other.

As they emerge, take each card from the pack with your right hand. They will prove to be the very cards selected. Afterward, place the entire pack in your inside pocket.

For another method of presentation, put the pack in a narrow glass (Fig. 2E) and move it forward. The sides of the glass will guide the cards upward. In this case, however, be sure to move all unthreaded cards to the front of the pack before you start the rising process. Otherwise, these untouched cards may rise, too, since you have no grip upon the pack itself.

This trick can be worked alone, but the cabinet produces so many silks when in action that an assistant is helpful. Back of box faces audience so open top hides view of mirror tops which would disclose the secret.

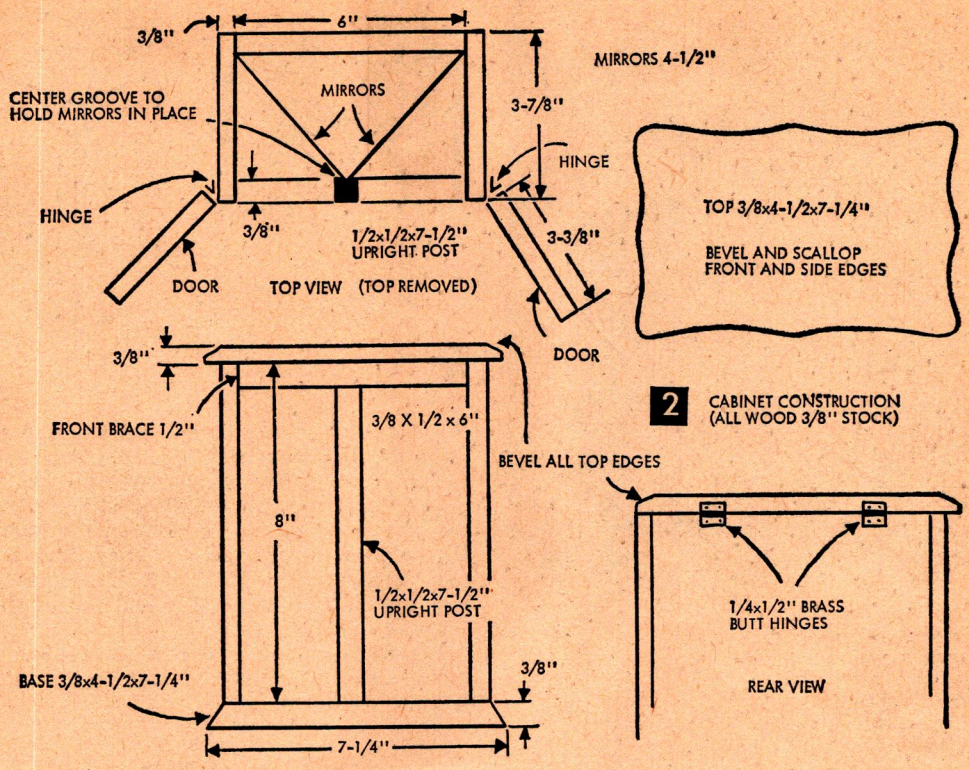
Handkerchief Production Cabinet

Build this tiny box properly and you account for the magical elements needed to make each production a spectacular show

ONE of the conjurors' most impressive tricks can be yours in exchange for an evening spent in your workshop carefully building the ornamental handkerchief production cabinet.

Right after showing off this box from every angle, with front doors open for inside as well as outside viewing, you can close the doors, open the top and produce large quantities of beautiful silks as in Fig. 1. All you need are a few pieces of ⅜-in. wood, decorative paper, and bright-chromed sheet metal. Anything from scrap boxwood to hardwood plywood will do.

You can cut all the wood from one 7½ x 36-in. piece to make up the cabinet as in Fig.



2 CABINET CONSTRUCTION (ALL WOOD 3/8" STOCK)

2, with overall dimensions of 4½ x 7¼ x 8¾ in. The only ½-in. wood called for is that for a front brace and center post behind the doors, and ⅜ x ½-in. strips can be used here by turning the ½-in. dimension to the critical side. The thickness is needed for a center groove used to hold metal mirrors in place. Sides, back, base, post, and brace can be assembled with glue and #4 x ¾-in. *fh* (flathead) screws or, to simplify the job, use 1-in. brads and slightly set the heads.

For Decorative Effect, the base is beveled outward on front and sides, while the top has a scalloped design cut into front and side edges with a slight top bevel to boot. These are not at all necessary but do add to the impressive appearance. To carry this out further, a large decal of a dragon is centered on the back and another oriental symbol affixed to the top, but this should not be done until the finish has been applied.

Install both doors and the top as in Fig. 2 with the tiny brass butt hinges common to small jewel boxes, music boxes, etc. (available in many hardware stores and mail order houses for cabinet work). Decorate the interior of the cabinet and inside door surfaces with a light colored paper, preferably of mottled or patchwork design.

Stain the cabinet exterior and other uncovered wood in a light or medium shade of your choice, preferably close match to the

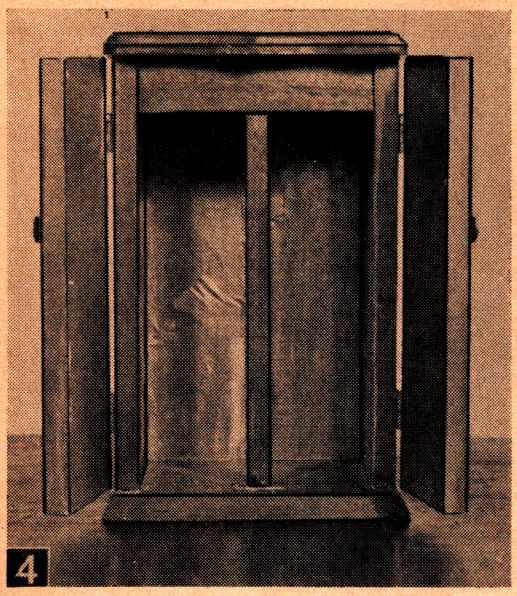
MATERIALS LIST—HANDKERCHIEF CABINET

No. Req.	Size and Description
1 pc.	⅜ x 6 x 8" wood (cabinet back)
2 pcs.	⅜ x 3⅞ x 8" wood (cabinet sides)
2 pcs.	⅜ x 3⅜ x 8" wood (cabinet doors)
2 pcs.	⅜ x 4½ x 7¼" wood (cabinet top, base)
1 pc.	½ x ½ x 7½" wood strip (center post)
1 pc.	½ x ½ x 6" wood strip (front brace) (above may be boxwood, pine, redwood, or hardwood plywood)
1 pc.	8 x 10" bright chrome sheet metal (mirrors)
3 prs.	¼ x ½" brass butt hinges
2 doz.	#4 x ¾" brass *fh* screws (cabinet assembly), or 1" brads
1 sheet	gift wrapping paper in mottled or patchwork design (lining)
Misc.	1 x 8" cloth tape, 2 wide head brass upholstery tacks (door handles), oriental decals for top and back, stain, lacquer

paper. Finish with two or three thin coats of clear lacquer. Apply decals as desired. Two decorative-head upholstery tacks will serve as door handles.

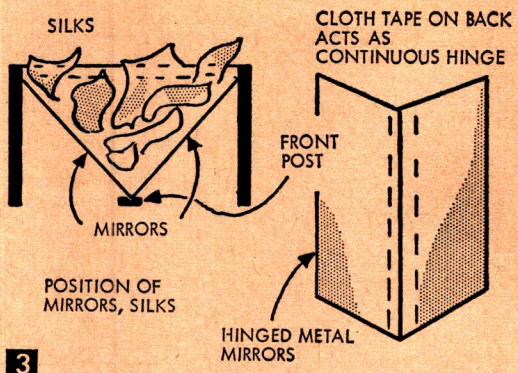
Metal Mirrors Are the Secret of the project. Install them right and you'll have a winning trick every time. If you have built the cabinet exactly according to the dimensions in Fig. 2, the mirrors will measure 4¼ x 8 in. each. However, modify the width accordingly if the distance from each back corner to the groove in back of the center post is not exactly 4¼ in.

Although glass can be used, it creates a breakage and handling problem, so it is preferable to cut the mirrors out of a thin sheet of bright chrome. An easy way to hinge them together is to place two long edges together



4

Even in this close-up shot, cabinet appears to be empty. Faint outline on floor reveals position of mirrors, which will reflect nothing but the paper lining as long as doors remain in this position.



3

with chromed side down and fasten with a cloth tape along the full length of the joint on the unpolished side as in Fig. 3.

You can now slide the mirror assembly in place through the top so that it fits between back corners and the center post just snug enough to stay put, but still easily removable (Fig. 2). In this position, and with front doors extended straight forward as in Fig. 4, anyone looking into the cabinet sees only the reflection of the side walls, but because of the angle, this appears to be the back of the cabinet.

Stuff the section behind the mirrors with silk handkerchiefs and streamers. As you push each into place, hook or loop its end to the end of the silk pushed in ahead of it. Make the last silk a large one to hold the rest tightly in place.

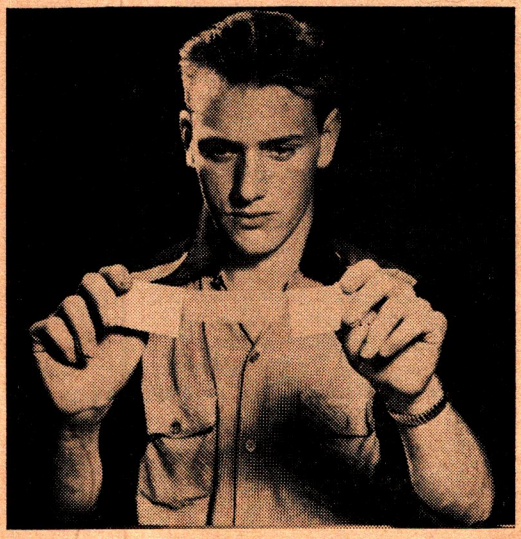
Begin the Presentation by showing the cabinet closed. Then open the doors straight out in front and turn the cabinet around slowly. Use one hand at the bottom and the other in back, so that every one can get a clear though brief view of the inside. So long as the doors extend straight forward, no view will be from too sharp an angle.

Now close the doors, make a few magic passes, and hold the cabinet with one hand while you open the top with the other. Reach down behind the mirrors and draw out the silks. A quick pull on each will bring along the corner of the next, so that you can produce the handkerchiefs in rapid succession.

Top edges of the mirrors will not be seen if you keep the cabinet tilted slightly backward. An easier way is to turn the back of the cabinet toward the audience during the silk production as in Fig. 1. You can then rest the cabinet on a table and the upraised top will hide the secret.

When the cabinet is not in use, remove the mirrors so that anyone examining it will find it quite ordinary.

Tug of War



• Cut a strip of paper almost through at two points, as shown. Now wager anyone that he can't break both end sections away from the middle section by means of steady pulling. No matter how carefully the cuts are made, the chances that both ends will part at once are so slim that it is practically impossible. Slight irregularities in the paper and in the direction of stress will always cause one link to give way before the other.

The Spirit Slate Trick

★ **An invisible hand writes a message in chalk**

MAGICIANS borrowed this trick from fake mediums many years ago and have been using it ever since. Two slates are shown blank on every side, yet when they are placed together a message appears.

Two identical slates are used, a good size being those with inside frame measurements of 6 x 9 in. (Fig. 1A). Larger sizes are even better. They are inexpensive and easy to obtain at stores and mail order houses dealing in school supplies. In addition, you need a special device known as a "flap." This is a sheet of thin, black material (Fig. 1B) cut to dimensions 1/16 to 1/8 in. smaller than those of the slates within the frames.

Write the message in chalk on the top side of one slate (A), cover it with the flap, then place the other slate (B) on A as in Fig. 1C, and you are ready for the trick.

Pick Up the Two Slates Together, holding them level. Draw away slate B with the right hand, thumb on top and press the left thumb against the top of A to hold the flap in place. Tilt both slates downward, one in each hand, showing the "thumb sides" blank.

Turn slate B over and place it on A. Square the two together and turn them over, showing the outsides of both. This causes the flap to drop from A to B as in Fig. 1D. Lift off A without showing its under side and casually lay B on the table. Step forward, turn A around and there's the message. You may pass the slate around among the spectators.

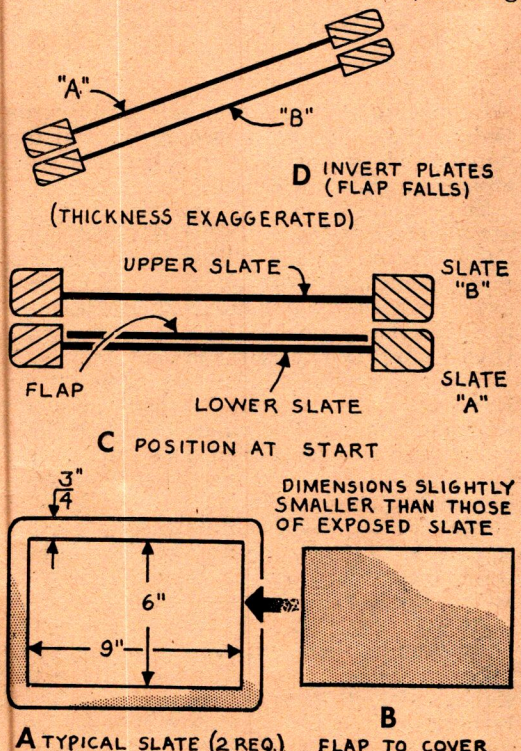
Now for the Message. The more mysterious it is, the better. If people are wondering how the "spirits" guessed what was on their minds, they will think less about how the slates could have been tricked. Here is one sure-fire type of spirit message:

Place the slates together, then hand someone a pad and pencil and ask him to write down a number containing three *different* digits such as 653, or 104, or any other such number they may choose between 1 and 1,000. If they want a number like 13, they can write it 013. Under no circumstances, however, do you look at the number.

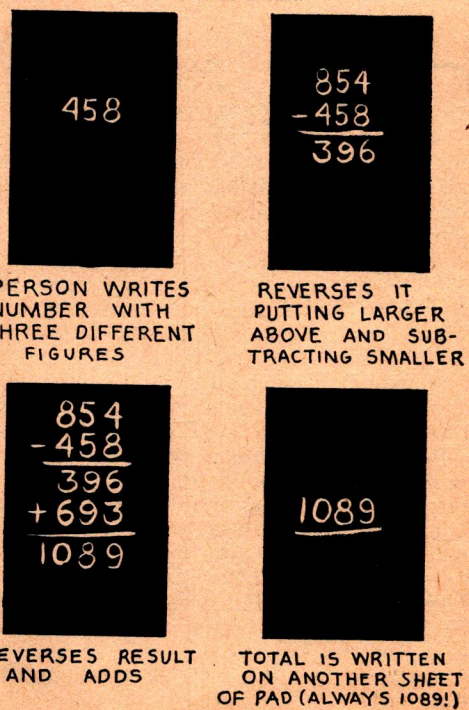
Next, tell the person to reverse his number and subtract the smaller from the larger as in Fig. 2. If he wrote 103, for example, he'd place 301 over it and subtract, leaving 198.

Third, ask your volunteer to reverse the latter number, then add the two together. In that case, that would be adding 891 to 198 to get 1,089. And that's the number on the slate.

It's an odd fact that the number will always be 1,089 regardless of what three-letter number was used at the start.

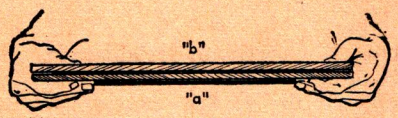


1 SPIRIT SLATES

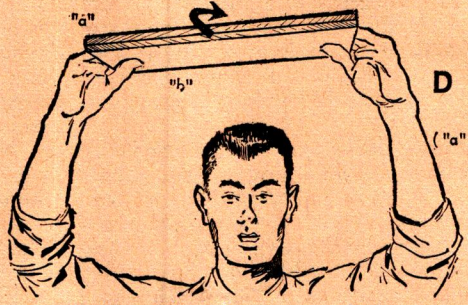


2 ADDING UP TO 1089

Another Slate Mystery Spooky Card Trick

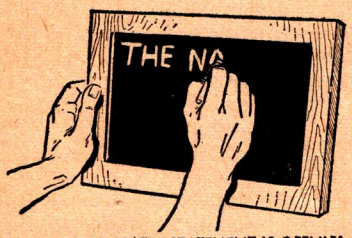


C SLATE "b" PLACED ON "a" AND BOTH TURNED OVER...

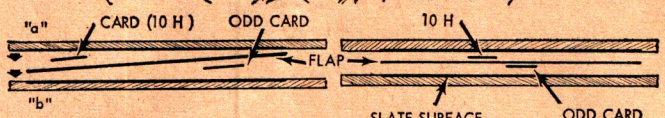


D AS THEY ARE RAISED ABOVE THE HEAD. ("a" NOW ON "b")

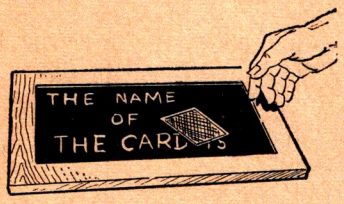
1 SPOOKY CARD ROUTINE



A "DUPLICATE" STATEMENT IS OPENLY PRINTED IN CHALK ON SLATE "b"

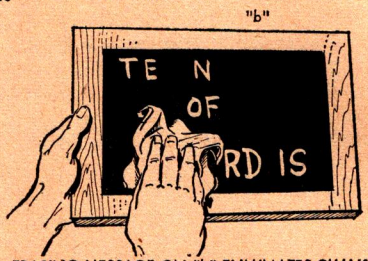


E DURING PROCESS, FLAP FALLS FROM "a" ON TO "b"



B ANY CARD DEALT FACE DOWN ON "a" (GOING ON FLAP)

F SLATE "a" NOW HELD FLAT AND CARD IS TAKEN FROM IT, TURNED FACE UP AND SHOWN TO BE 10 H



G ERASING MESSAGE ON "b" ELIMINATES CHALK LEAVING ONLY THE PAINTED MESSAGE: TEN OF HEARTS

HERE'S a quick follow-up to the Spirit Slates using the same flap principle. On one slate you print with chalk the statement: "THE NAME OF THE CARD IS." A volunteer is invited to select a card and place it face down between that slate and another so that the spooks can erase your statement and write the name of the card in its place.

But when the slates are taken apart, the statement is unchanged. The spooks have utterly refused to name the card. You show it to your audience and they note that it is the 10 of hearts, so you decide to rub out the statement and start all over. As you erase, however, some of the writing remains. But now the slate reads: "TEN OF HEARTS."

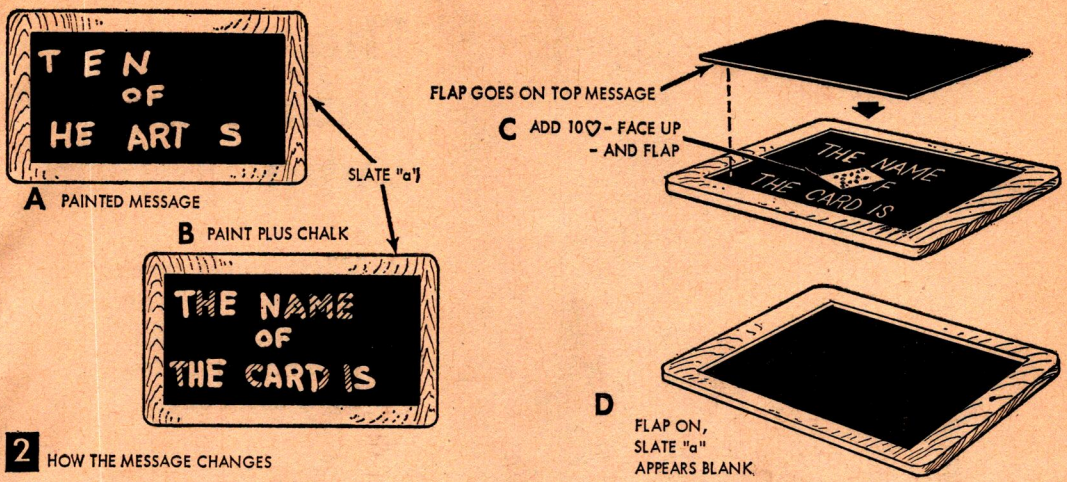
Prepare the Slate First by using white paint to inscribe "TEN OF HEARTS" but be sure to print it in capital letters and spaced exactly as shown in Fig. 4A. When the paint is dry, use chalk to supply the missing letters needed to complete "THE NAME OF THE CARD IS" on the slate (Fig. 4B). Now take the Ten of Hearts from a pack of cards, lay it face up on the message side of the slate, and place the flap over it on the slate (Fig. 4C).

Place this slate (A) on the table with flap side up (Fig. 4D) and set the pack of cards (minus the 10-H) on it face down. Put the unprepared slate (B) down alongside with a piece of white chalk resting on it.

Show Slate B to your audience first and use the chalk to print "THE NAME OF THE CARD IS" on it (Fig. 5, Step 1), saying that this is to encourage the spooks by telling them exactly what is wanted. Print this so it closely resembles your hidden statement on A. Give Slate B to a spectator to hold.

Now pick up Slate A, holding it like a tray. Hand the pack of cards to someone while telling him to note that all are different. Have him shuffle the pack, then draw out a card face down. Ask him to lay the card on your improvised tray (Slate A) without looking at it (Step 2), which will make it harder for the spooks to guess it. Take Slate B and place it, chalked side down, on Slate A (Step 3) so that the unknown card is in between.

At this point, hold the slates at opposite ends, thumbs above, fingers below, and state that you "sense a spirit vibration." Raise the slates and hold them just above your head, turning them over as you do (Step 4). Announce that the message should have appeared by now and lower the slates just as they are.



2 HOW THE MESSAGE CHANGES

With This Bit of Byplay, you have reversed the slates so that the flap is now on B which is below A (Step 5), but the action is so natural that no one will suspect it. Lift up the upper slate (A) and show it to the audience. Though you have switched slates, they still see your original "THE NAME OF THE CARD IS" statement—so they think it is the same slate.

Hand Slate A to a spectator, saying that the spooks seem to have slipped. The face down card lying on Slate B has also been switched, but everyone will think it is the card placed on the slate earlier by one of the audience. Hand the card to that person (Step 6), take pack from him, put it on Slate B and lay it aside like a tray as you will have no more use for it.

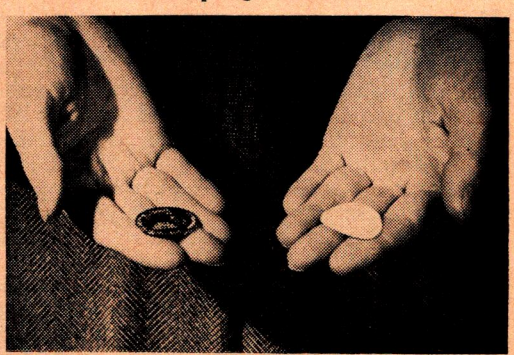
This turn of events leaves one person with Slate A and another holding a card that proves to be the 10 of hearts. Take the slate from the spectator and rub out the message, saying: "I suppose we will have to start all over, but it is odd that the spooks didn't tell us the name of the card. They have never failed me yet♠—"

By then, you have rubbed off the chalk, but the painted portion of the lettering remains, clearly spelling out "TEN OF HEARTS" in wide-spaced fashion (Step 7). Take the card, show it along with the slate, and then lay both aside.

Nimble Thimble

• It's not hard to pull a thimble through a handkerchief if you secretly use two thimbles, one fitting loosely over the other and hiding it. With both on one finger, drape the handkerchief over them, reach under and remove the larger thimble, and put it on again over the handkerchief. Now grasp the handkerchief by the corners and whisk off the larger thimble. Your friends will be startled to see a thimble still on your finger.

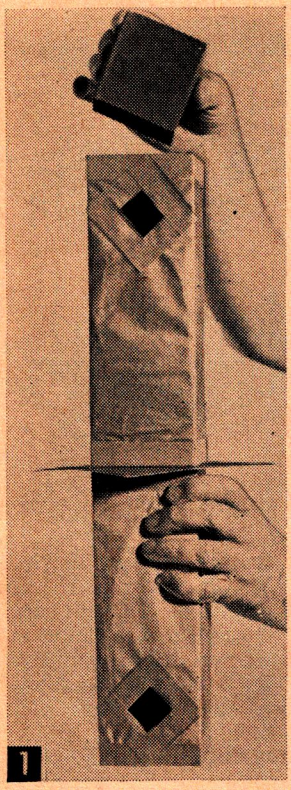
Helping Galileo

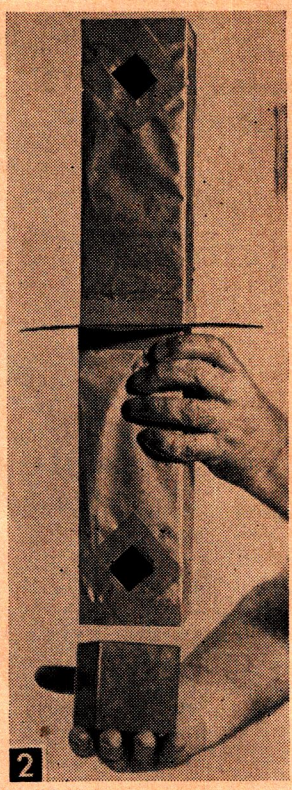


• Challenge your friends to drop a coin and a paper disk of the same size from an equal height and have them reach the floor at the same time. After they have tried unsuccessfully, show that it can be done. Place the disk flat on top of the coin, held horizontally, then drop both together. Lowered air pressure above the coin during its fall will hold the paper on securely. Any other method of releasing them will cause the disk to flutter down far behind the coin.

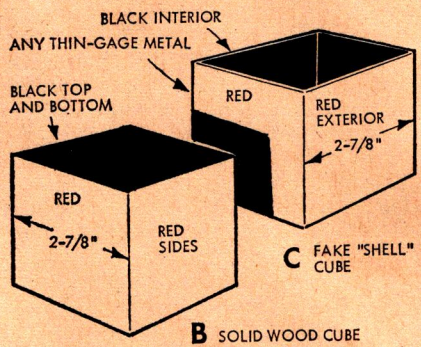
The Cabalistic Cube

★ **What magic power promotes its prompt passage through chimneys blocked by a solid sheet?**





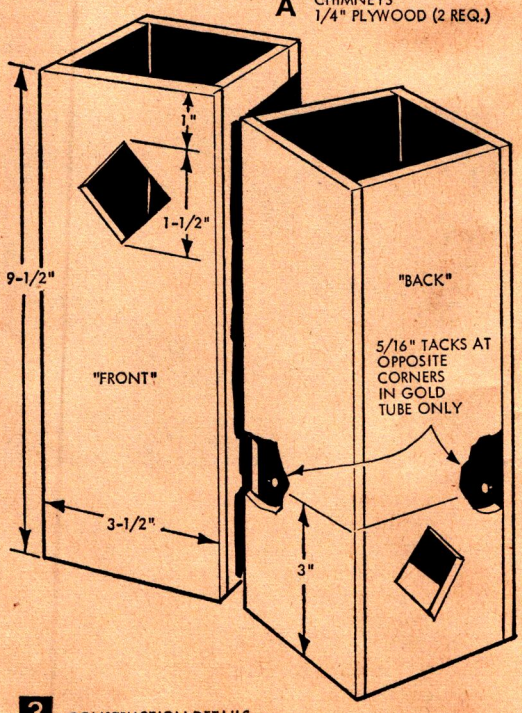
The "cube"—actually a red shell with black interior—is being dropped at left into upper chimney. Left hand, secretly holding real cube at top of lower chimney, releases it an instant later (right), and cube apparently passes through stiff plastic sheet.



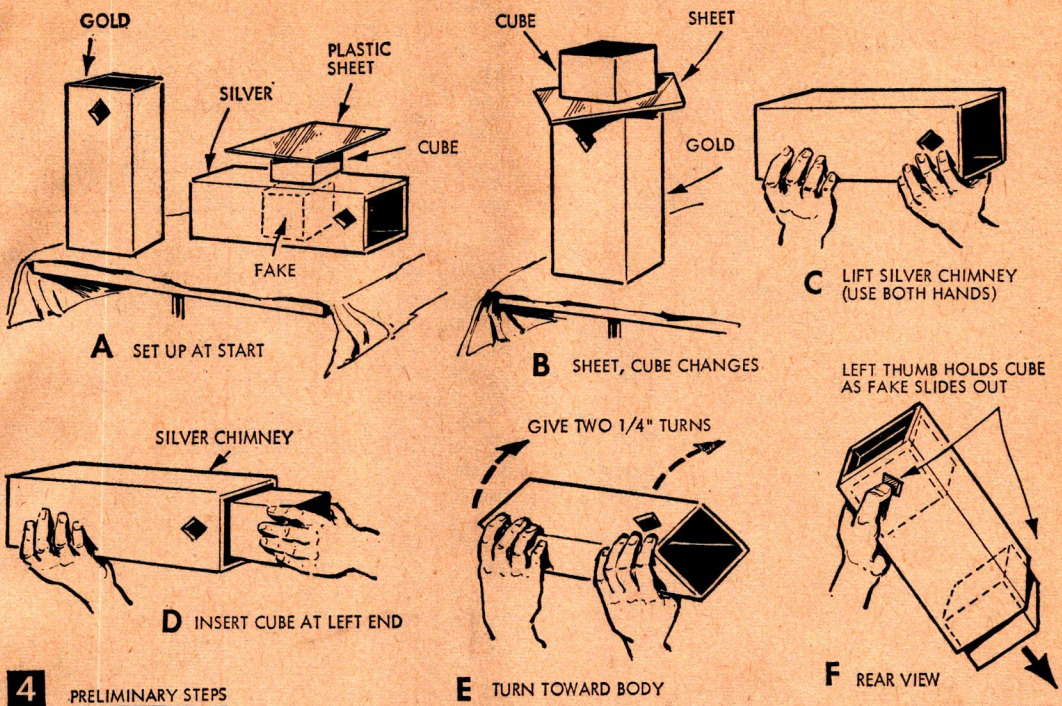
THIS is one of those feats of wizardry that seemingly defies all scientific laws and thereby wins due acclaim. When the magician drops an innocent looking cube through two chimneys, his hand actually has to race beneath them in order to catch the cube, despite the fact that a sheet of stiff plastic or other solid material bars the path. You can make the props easily in your workshop and present the trick in a really professional style.

So far as the audience knows, the appliances consist of two square chimneys, a wooden cube painted red, and a small square sheet cut from plastic, cardboard, metal, or any other substance stiff enough to lie flat (Figs. 1 and 2). The spectators aren't made aware of a thin metal shell sized to match the cube but completely open at the top and bottom. And that is what makes the trick.

Build Chimneys of Plywood or other ¼-in. stock to stand 9½ in. high and with 3-in. square interior clearance, as in Fig. 3A. Each has a 1½-in. square "diamond" cut through one side 1 in. from the top and also on the opposite side 1 in. from the bottom.



3 CONSTRUCTION DETAILS



4 PRELIMINARY STEPS

Paint each chimney black on the inside but finish the exterior of one in gold, the other in silver. If preferred, you can substitute paper in these colors for the exterior paint. Prepare the cube and open shell as in Fig. 3B and C.

5

Hand at upper left shows how thumb is used to retain real cube at top of lower chimney. Sheet of plastic below, placed between chimneys, could be of any other solid material. Hand at right holds shell cube, the "fake" that makes trick possible.

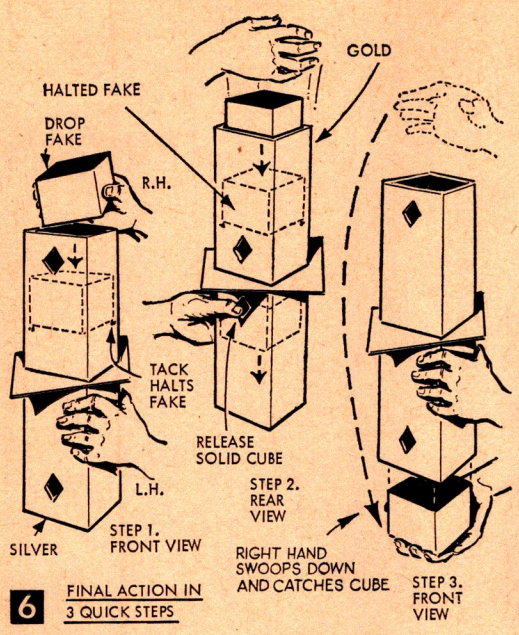
You can cut the 2⅞-in. cube from a short piece of 4 x 4 post (actual size 3⅝ x 3⅝ in.). The special fake, or shell, can be fashioned from sheet metal, aluminum sheet, or even a rigid, thin piece of plastic. Paint the sides of both cube and shell bright red and treat other areas with the same black applied to the chimney interiors.

Set openly on a table, the fake should look exactly like the cube, its black interior appearing the same as the top of the cube. A chimney can be shown as empty while the fake is in it when prepared in this manner.

Inside the gold chimney, insert two tacks at opposite corners and 3 in. above the bottom edge (Fig. 3A). Use the 5/16-in. size and allow heads to protrude ⅛ in. so that they will act as stops for the fake-cube.

When the cabalistic cube is brought "on stage" for presentation, it should be set up as in Fig. 4A. As you stand behind your table, the silver chimney should be on its side and to your left, with the fake concealed inside at the center. Note that one of the diamonds is in front at the left. Set the cube over this chimney as shown and place a stiff plastic sheet about 5 in. square over that. Stand the gold chimney on the table to your right, making sure that the tack "stops" inside are toward the bottom.

Start Your Presentation by lifting the gold chimney and tilting it toward the audience to show that it is empty. Then replace it exactly as it was. Next, show the sheet of plastic, tap it to prove its solidarity, and set it on



6 FINAL ACTION IN 3 QUICK STEPS

the gold chimney as in Fig. 4B.

Pick up the wooden cube, toss it and catch it, rap it with a wand to show that it is solid, and put it on top of the plastic sheet (Fig. 4B). Lift the silver chimney with both hands, one at each end as in Fig. 4C. Keeping it horizontal, turn the left end toward the audience to show that it is "empty." Since the black lining of the fake blends with the interior of the chimney the fake will not be noticed.

Pick up the solid red cube immediately and insert it in the left end of the silver chimney (Fig. 4D). At the same time, swing the chimney back to its original position. A red side of the cube will then show through the diamond opening at the "front" of the chimney. During this action, keep the chimney level and handle it rather slowly so that the hidden fake does not slide.

Now, hold the silver chimney with both hands and give it two quarter turns toward yourself as in Fig. 4E, thus moving the diamond opening at the left to the back. Secretly press your left thumb through the diamond opening to keep the cube in place (Fig. 5). Deliberately tilt the right end of the chimney downward so the fake will slide out as in Fig. 4F. Catch it with your right hand and set it on the table as though it were the solid cube—which it appears to be.

The deception is perfect because everyone assumes that you let the solid cube slide down through the silver chimney. Actually, the cube is still at the top of the chimney.

Action Follows Fast. Take the plastic square from the gold chimney with your right hand and set it on the silver chimney.

MATERIALS LIST—CABALISTIC CUBE

No. Req.	Size and Description
1 pc.	¼ x 14 x 20" plywood or hardboard (chimney sides)
1 pc.	2⅞ x 2⅞ x 2⅞" wood (cube)
1 pc.	2⅞ x 12" thin gage sheet metal, aluminum, tin, or plastic (shell)
2 pcs	10 x 14" colored paper—one gold, one silver (to cover chimneys)
1 pc.	5 x 5" stiff plastic sheet (solid between chimneys)
Misc.	¾" brads, 5/16" tacks, glue, black and bright red paint

Then place the gold chimney on top of the plastic square. Finally, pick up the fake cube with your right hand and partly lower it into the gold chimney. This should now appear as set up in Figs. 1 and 6. Now you are ready to proceed to the climax in three lightning-fast steps.

At the count of "Three!," drop the fake (Step 1). The stops in the gold chimney will catch it. An instant later, secretly release the solid cube from the top of the silver chimney (Step 2) by relieving pressure of your thumb (Step 2). Swoop your right hand down to catch the falling cube as in Fig. 2 (Step 3). This conveys the perfect illusion of the solid cube dropping through the chimneys and penetrating the plastic on the way.

For a Quick Windup, set the solid cube on the table with a thump. Then lift the gold chimney at the top with your right hand and tilt it upward and forward to expose the interior. Just before reaching the horizontal, lower the end again and set the chimney upright on the table (Fig. 4A).

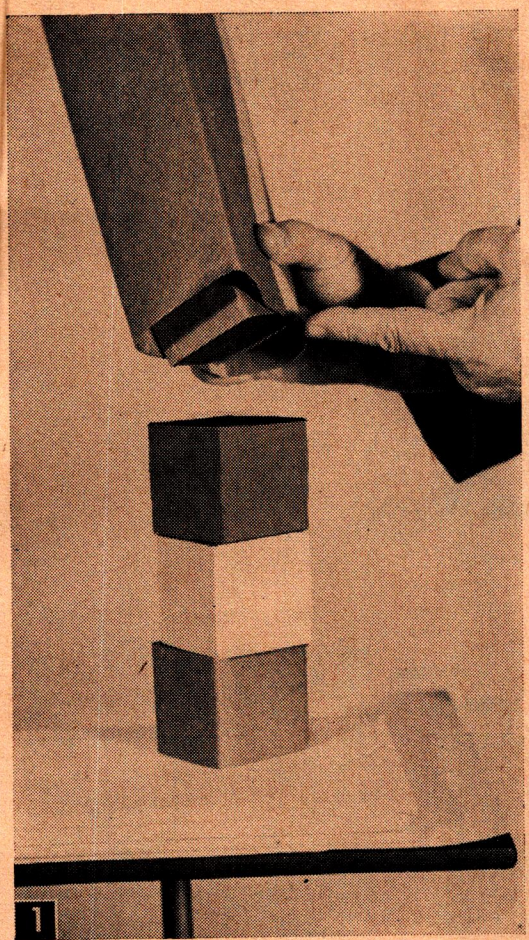
Display the plastic sheet with your right hand while the left tilts the silver chimney upward and forward so the audience can look through it. Set the silver chimney upright on the table with your left hand and pick up the solid cube. Walking forward, hand the solid cube and the plastic sheet to the audience for examination, as though they were the only objects that really figured in the trick.

Cutting the Cards

• Naming the cards with a dinner knife thrust at random into the deck is a real puzzler, but it is easy to do. You can never miss telling the card immediately above the knife if the blade is bright and you pull it over to the index corner of the card—always the left-hand corner toward you when the deck is face down. Be sure to tilt the handle of the knife slightly downward so you can catch a reflection of the index mirrored in the blade.

A Trick You Can Safely Repeat

The Baffling Blocks



Three blocks that know their patriotic place. Whenever they are moved out of order and covered, they usually wind up as red, white, and blue. Fourth block fake, retained in chimney by squeezing it, is purposely shown here. When working the trick, it should be held a little bit higher in the chimney.

ANY trick that can be repeated and yet sustain interest is a good trick, especially for the amateur magician performing before friends. An experienced wizard can ignore requests of "Do it again!" but a beginner cannot easily disregard them. He thus needs a few tricks that he can do several times without risking detection. One of them is the "Baffling Blocks," which in fact becomes more baffling as it goes along.

The audience can plainly see three blocks: one with red sides, another white and a third blue, while all have black tops and bottoms. Every time they are stacked in irregular order and covered with a chimney, they reappear as red, white, and blue when the chimney is lifted (Fig. 1). This can be repeated over and over.

Behind the Scenes is a fourth block—or fake—painted red on two adjoining sides, blue on the other two, and black on top and bottom. All four blocks are of wood and can be of any one size from 2 to 3 in. to a side. Make the chimney of a heavy cardboard or corrugated paper folded so the sides will be ¼ in. wider than the blocks and four to five times as long as a single block. This will permit easy sliding over the stacked blocks.

To go with the 2½-in. blocks in Fig. 1, the chimney was made 12 in. long and covered with a colored art paper.

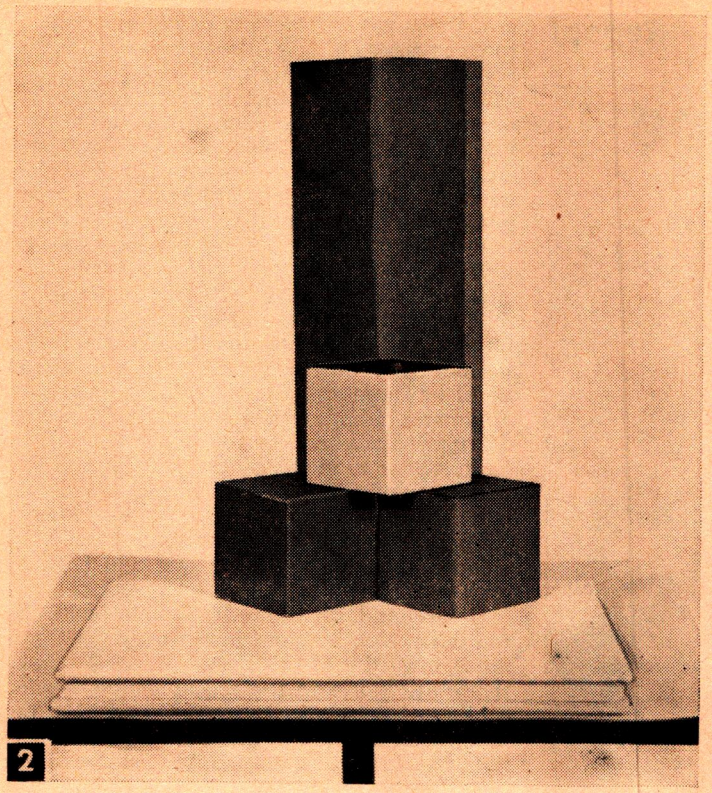
Beforehand, set the red and blue blocks on the table, side by side, each turned so a corner is toward the audience as in Fig. 2. Place the white block on the red and blue, turned at the same angle to form a pyramid. Set the fake block in back of the genuine ones, with its two blue sides toward the front. Place the chimney over the fake block as in Fig. 3 and all is in readiness for the show.

First, call attention to the blocks and their colors. Then pick up the chimney and show that it is empty. (The fake block remains hidden behind the pyramid.) Set the chimney over the fake block again and with the other hand, pick up the genuine blocks and show them, one by one.

Drop the blocks into the chimney in an odd order of white, red, and blue (Fig. 4A), saying that the blocks have a way of rearranging themselves in a patriotic fashion: red, white, and blue (Fig. 4B). In lifting the chimney, grasp it 3 in. above the bottom, as in Fig. 1.

Finger Pressure Holds Block. As you reveal the red block, press the sides of the chimney, gripping the blue block just above. Carry away the blue block in the chimney and set the chimney beside the three stacked blocks. Point out that the blocks are now in the order of red, white, and blue, from top to bottom, and remark that this happens to be their idea—not yours. In fact, you will have the blocks do it again.

Drop the blocks down the chimney in the order of white, red, blue (Fig. 4C). Handle the first two leisurely but drop the fake block in rather quickly, showing only its blue sides. This time, when you lift up the chimney, carry the fake block away with it (Fig. 4D). The blocks will again be red, white, and blue from top to bottom.



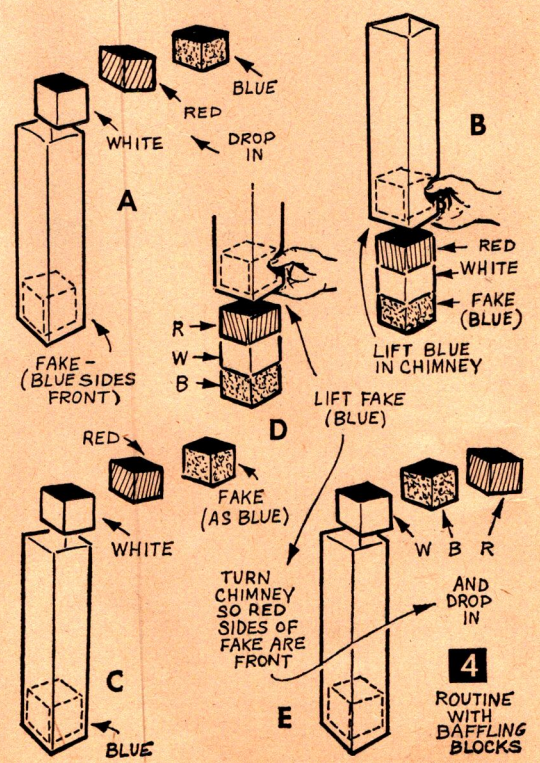
Pyramid setup for the blocks at start of performance. Front view (left) and side view (right) show blocks mounted on a book, but a board would do just as well. Added height helps to keep fake block hidden in rear when chimney is lifted so that it can be shown as empty.

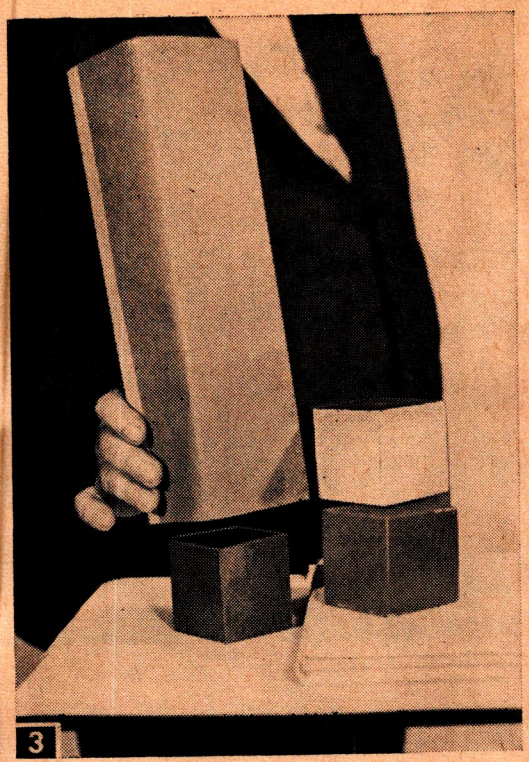
Turn to the audience as though you, too, were surprised. This gesture enables you to give the chimney a half turn in a natural fashion. Move back a step and set the chimney on the table so that the red sides of the hidden fake are now turned toward the audience (Fig. 4E). Then drop the blocks into the chimney in the order of white, blue, and red, showing each as you comment, "Sometimes the blocks work from the bottom up—like this!"

Lift up the chimney, showing a red (fake) block, then the white, then the blue (Fig. 4F). Carry away the red block at the top and set the chimney down. Now drop the blocks in the order of white, blue, and red, handling the fake block with due care (Fig. 5G). Raise the chimney once more carrying the fake block with it, and the blocks will again show red, white, and blue from the bottom up (Fig. 4H).

MATERIALS LIST—BAFFLING BLOCKS

No. Req.	Size and Description
1 pc.	2½ x 2½ x 12" wood (blocks, fake) (This post can be trimmed from a 3 x 3 post.)
1 pc.	12 x 12" heavy cardboard or corrugated paper (chimney)
2 pcs.	9 x 12" art construction paper, same color (chimney cover)
Misc.	book or board (platform), glue, red, white, blue, and black paint





A Good Way to Finish the trick is to set up the three blocks as a pyramid in front of the chimney, as originally. Lift the chimney, show it to be empty and replace it over the fake block. You can then drop the three blocks into the chimney and simply lay it aside.

If you are using a table with a well, the best plan is to set the chimney just in front of the well when you arrange the blocks in pyramid fashion. As you lift the chimney, slide it backward enough to let the fake block drop into the well (Fig. 4J). Now you cannot only show the chimney to be empty, but also pick up the genuine blocks, one by one, and pass them out to the audience for examination. Disposal of the fake block is perfect.

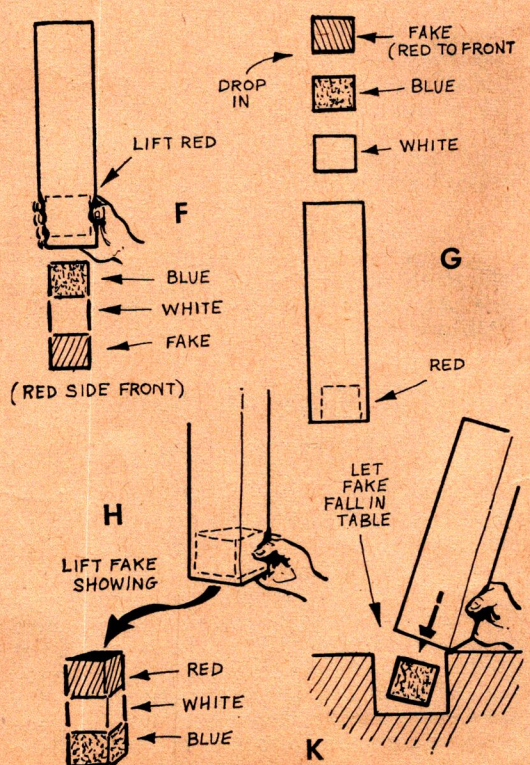
Air Lifts a Glass

• It may seem impossible to cause a toy balloon to lift a glass, but it is really easy. Drop a lighted paper match into the bottom of the glass and, while it is still burning, place the balloon in contact with the rim of the glass. To everyone's astonishment, part of the balloon begins to bulge into the glass. As soon as the match has gone out, the glass may be readily lifted by lifting the balloon.

Tumbler Through the Table

• Press several sheets of newspaper down firmly over an inverted tumbler, which you claim you will strike right through the table. Over these sheets drape a napkin—to catch the pieces of glass in case of mishap! Then strike the top of the mound a sharp blow with one hand. With the other hand, produce the glass, unharmed, from beneath the table.

Just be careful to press the paper around the glass so that the paper will retain its shape even with the glass not there. Use of the napkin is just a ruse that permits you a moment to slide the covered glass to the edge of the table and into your lap; you slide the empty shell, now covered with the napkin, back onto the table.

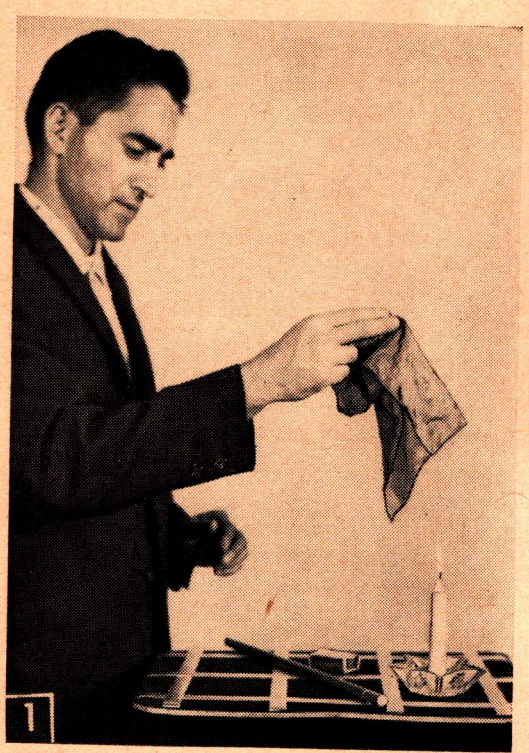


A Fast Buck

• How quick are your reflexes and those of your friends? You can test them by means of nothing more than a crisp bill. Hold one end of the bill so that it hangs vertically, and have the person to be tested hold his thumb and forefinger close to, but not touching, the opposite sides of the center of the bill. Without warning, let go. Your friend must catch the bill before it slips through his fingers. It can be done, but it is surprisingly difficult.

3 Silk Tricks Good for a Combined Show

1 Silk from Flame

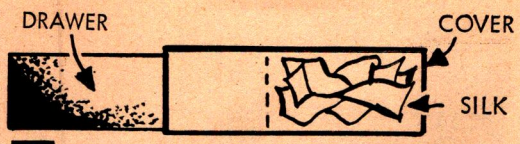


Silk mysteriously appears in magician's hand as if he drew it from the candle flame.

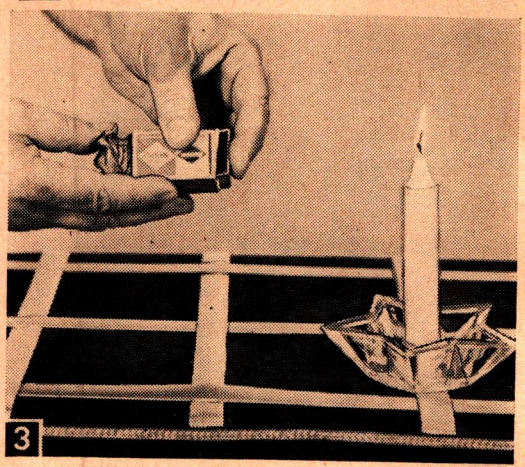
THE magician shows his hands completely empty, then takes a match, strikes it, and lights a candle in a candle holder. A few moments later, he snuffs out the flame and at the same time draws a bright red silk handkerchief from it!

To prepare this feat, hold one corner of a thin, red silk handkerchief and wind the rest around it in a small compact bundle. Push this inside the cover of a safety matchbox, which will force the drawer well out as in Fig. 2. Place box on your table beside the candle, with the drawer of the matchbox toward the front.

Work the trick by picking up the box with the left hand, then taking out a match and striking it with the right. Light the candle



2 SILK HIDDEN IN MATCH-BOX



Normal act of closing the matchbox after lighting candle forces hidden silk into hand. Hands are purposely tilted forward here to disclose this secret action.

and lay the match aside. Grip the rear of the matchbox with the right hand and push the drawer shut with the left. This forces the bundled silk into the right hand (Fig. 3) which conceals it.

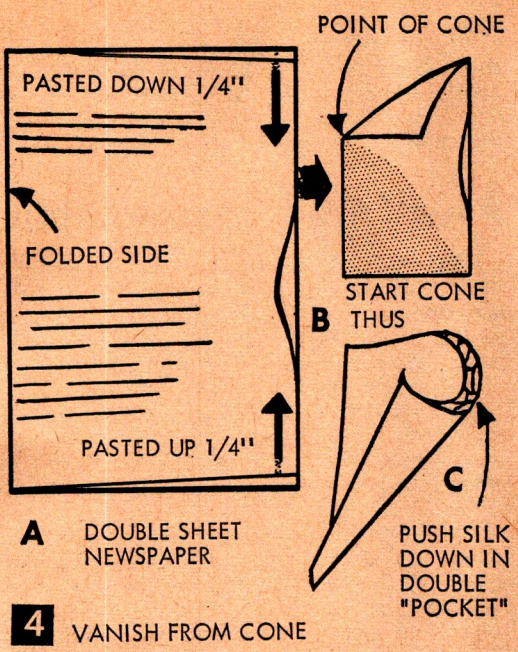
Catch a loose corner of the silk between the right thumb and fingers. Snuff out the candle and bring the right hand above it, releasing the hidden silk. At the same time, whip the right hand upward to give the effect that you are pulling the silk from the flame.

Since the box is open when the match is struck, only a few matches should be in it to eliminate the danger of igniting an entire box. *Always take precautions* when working with matches.

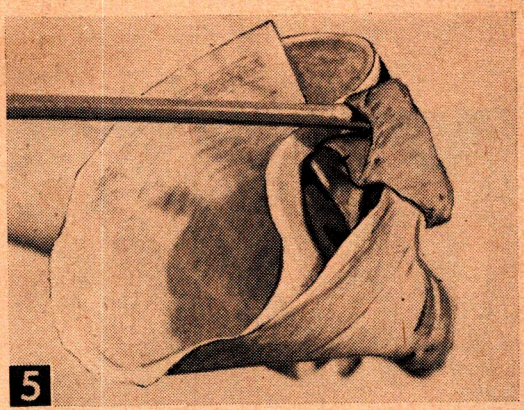
2 Vanish from Paper Cone

A sheet of newspaper is rolled into a large cone and a silk handkerchief is pushed down into it with a wand or pencil. When the paper is unrolled, the handkerchief has vanished.

For this you require a double-page "spread" from a full-sized newspaper. Fold paper in half from left to right to form a single sheet. Paste the two sheets along the top and bottom; also about one-quarter of the way down the right side and up the same distance from the bottom, as in Fig. 4. Make



4 VANISH FROM CONE



Wand is helpful in pushing silk deep into double side of two-ply newspaper cone. Normally, cone is held upright so that no one sees the double side.

sure that the edges of the double sheet fit evenly.

To form the cone, fold the upper left corner well down toward the center crease, and roll it so that the point of the cone is at the left center (Fig. 4B). Hold cone in the left hand, its mouth upward and with the two high points facing the audience. The other side will open automatically between the double sheets. Push the right hand in to open up the space still more; then push the handkerchief loosely into the cone (Figs. 4C and 5) and go deep into the double side.

To make the vanish, press the double side together with the right hand, thumb inside, fingers outside. Release with the left hand so the cone falls apart. The right hand now holds the paper with its long edge upward as in Fig. 6. The left hand takes the opposite edge. Fold the paper and lay it aside, showing both sides in the process.

3 Candle to Handkerchief

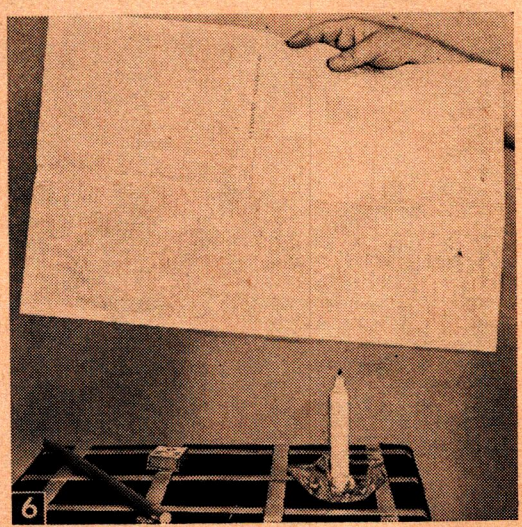
A lighted candle is taken from a candlestick holder, blown out, and rolled up in a sheet of newspaper. Both ends of the candle are shown before the ends of the roll are twisted. The newspaper is later torn open and the candle has vanished, only to have a red silk handkerchief appear in its place.

Roll a sheet of color-matched glazed paper around a candle to form a "shell" or tube. Back this with a layer of newspaper and glue it to shape. Cut off the top and bottom ends of the candle (or the ends of a shorter candle) and fit them into the ends of the tube—after first pushing the handkerchief inside as in Figs. 7 and 8. If the candle is lit for a little while, wax will drip down from the wick area, adding to the realistic appearance of the fake candle.

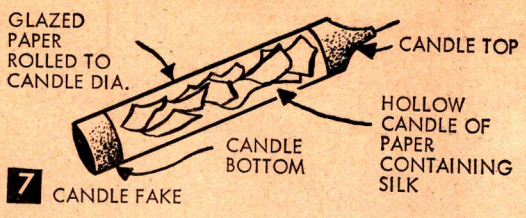
To perform, simply light the candle, which is standing in its holder. Roll up the candle in a small sheet of newspaper, show both ends of the candle, and twist the ends of the

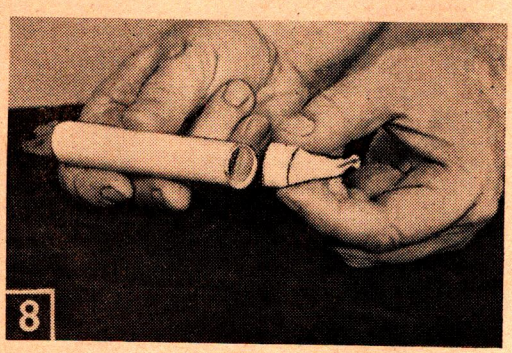
MATERIALS LIST—3 SILK TRICKS COMBINED

No. Req.	Size and Description
2	12 or 16" sq. thin, red silk handkerchiefs
1	white candle
1	candlestick holder
1 box	safety matches
1	standard-size newspaper
1 pc.	6 x 6" glazed paper, same color as candle (fake candle)
Misc.	paste, glue

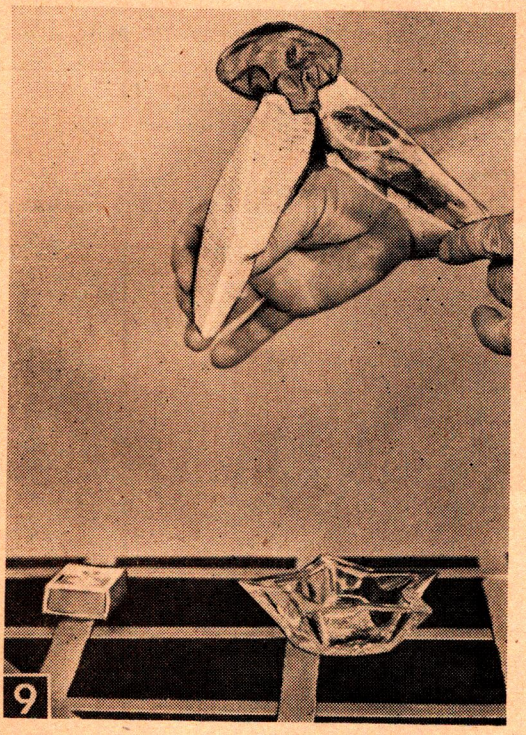


When cone falls apart, newspaper spreads wide open. A hand holds the double-side edge and the silk has vanished.





Wick end of candle being inserted into paper tube. Silk handkerchief protruding from other end will be hidden when candle bottom is inserted there.



A spectacular finish as magician extinguishes the candle and rolls it up into a sheet of newspaper. Fake candle tube tears open along with the newspaper, revealing silk instead of candle.

paper. Break open the paper and the shell candle as well, as in Fig. 9, and produce the silk. The newspaper lining of the shell will help hide the secret. The portions of the paper can be crumbled and laid aside with the candle ends still in them.

As a Triple Combination:

Load the fake candle with a red silk and stand the candle in its holder. Load the matchbox with a duplicate silk and place it on the table. Have a double sheet of newspaper lying on a chair and a smaller square of newspaper upon it.

Start by lighting the candle and producing a silk from its flame, as in "Silk from Flame." Wrap the candle in the small sheet of newspaper and give it to a person to hold, or simply set it in a glass.

Now form the large sheet into a cone, tuck in the red silk you just produced from the flame and do the "Vanish from Paper Cone." Lay the big sheet aside, take up the small tube of newspaper, break it open, and produce the silk again, completing the "Candle to Handkerchief" transformation.

Automatic Coin Dryer

• Pour a little water on the bottom of a flat porcelain or Pyrex plate, deep enough to cover a coin previously placed there. Now challenge anyone to remove the coin without moving the plate or touching the coin with any implement. He must do this without wetting his fingers.

How is it done? Crumple a small piece of paper, place it on the plate, and light it. Then quickly place over the burning paper an inverted tumbler. The fire first heats the air in the tumbler, expanding it; when the fire goes out, the air contracts and draws into the tumbler all the water on the plate, leaving the coin dry.

Candle from the Pocket

★ **For comic relief after a candle vanish, you can bring it back quick as a flash**

Ready for performance at any given moment during a show—a lit candle drawn from your pocket.

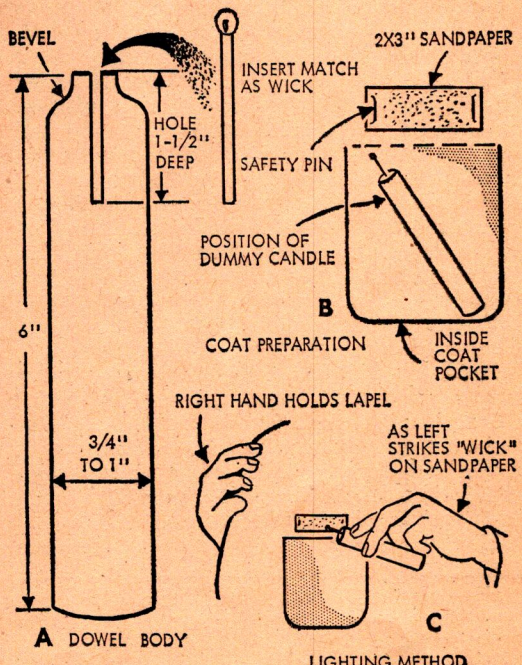
IT'S startling to see a magician reach into his inside coat pocket and nonchalantly bring out a lighted candle. This lightning-fast trick is made to order for comedy relief at any point during a show, and is a particularly good follow-up to a candle vanish such as the "Candle to Handkerchief Transformation." While everyone is wondering where the candle went, suddenly it's back again (Fig. 1).

Preparation of the lighted candle is almost as simple as performing the trick. Cut a 6-in. length of a ¾- or 1-in. dia. dowel stick and mark the center at the cut end. Select a wooden match of the kitchen variety that will strike anywhere and measure its diameter. Now bore a hole of this diameter 1½ in. deep at the center mark as in Fig. 2A.

If you want this end to resemble the exposed wick end of a new candle, mold it as in Fig. 2A. You can whittle this to shape with a sharp penknife. If you prefer the appearance of a used candle, leave the end squared off but slightly round the edge.

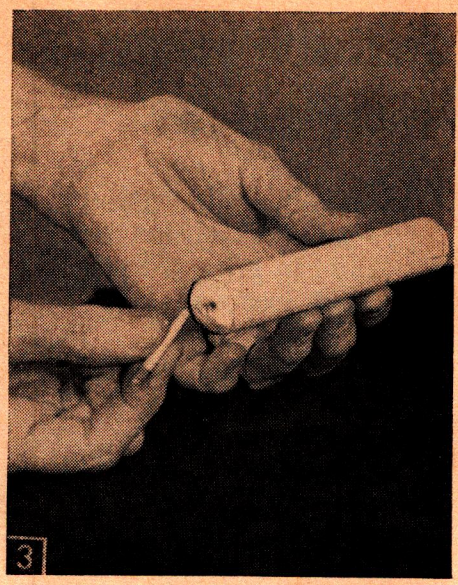
Paint the dummy in a semi-gloss off-white shade to resemble a plain wax candle.

Match is the Wick. Fasten a 2 x 3-in. strip of medium sandpaper directly over your inside coat pocket with two small safety pins, as in Fig. 2B. Also, insert the match in the



2 FAKE CANDLE

A working view showing how, all in one motion, the magician holds coat, takes "candle" from coat pocket and rubs it against sandpaper on the way out. Timed right, it will be lit as it comes into view of audience.



Break off end of matchstick if necessary so that head will be about ¾ in. away when match is inserted in dowel hole.

hole as in Fig. 3 and put the candle fake in your pocket below the sandpaper. They can stay there for an indefinite time during your show until the proper moment arrives.

When ready to produce the candle, stand with your right side toward the audience. Hold your coat lapel in the right hand and draw it outward as in Fig. 2C. At the same time, reach into your pocket with the left hand, bring out the candle and immediately strike the match on the sandpaper as in Fig. 4. Do the striking back-handed—away from your coat and shirt—so that the candle will be pulled outward as well as forward, coming into view the moment the match flares up. The match, of course, will pass for a wick.

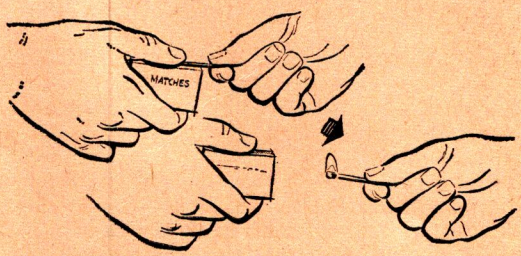
Hold the candle briefly, then blow it out before the match burns down to the point where it might damage the painted end. Put the candle in a candleholder or simply lay it aside. Whenever you have the opportunity, replace the candle in your pocket with a fresh match and you're set for an encore.

Unless your pocket is subject to undue friction, there is no danger that the match will ignite prematurely, but be sure that the head cannot reach the sandpaper while the candle rests in the pocket. It is much more difficult to use a wooden match from a safety match box. Not only is it thinner and much more likely to break, but it will not ignite except when rubbed against the small striking surface supplied with the small box. And that's not an easy target inside your coat unless you look at it, which spoils the effectiveness of the trick.

MATERIALS LIST—CANDLE FROM POCKET

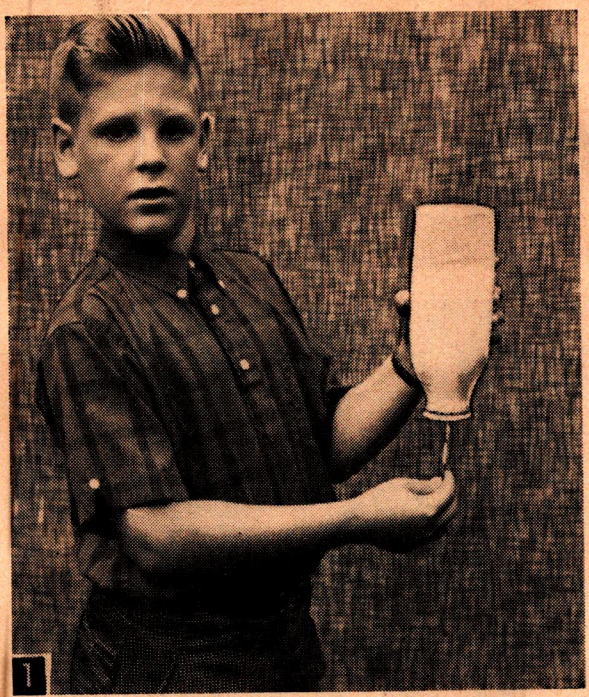
No. Req.	Size and Description
1	1″ dia. x 6″ long dowel (candle body)
1	wooden match non-safety kitchen variety (wick)
1 pc.	2 x 3″ medium-grade sandpaper (strike surface)
Misc.	2 small safety pins, semi-gloss off-white paint

A Light Matter



• This is more of a gag than a trick, but it contains an element of surprise. The next time someone begs a match of you, present it to him in the manner shown in the drawing. If he pulls it swiftly enough—and if you don't think he will, you can help by jerking the box back as he grasps the match—he will find the match all lit and ready to use. For best results, hold the match head rather firmly against the striking surface; it will not light until it is several inches from the box.

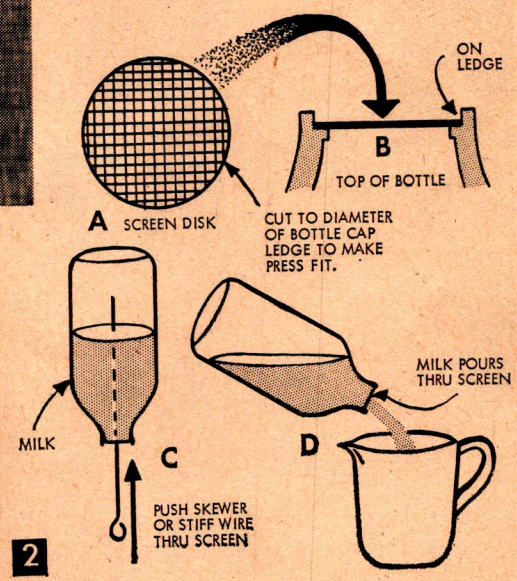
Strange Riddle of the Magnetic Milk



1

★ **It stays in upside-down bottle until commanded to flow out**

It's an ordinary quart milk bottle with cap removed, filled in the presence of the audience. Milk remains in overturned bottle, even when young Billy Radner pokes a thin skewer through it.



2

HERE is wizardry indeed! The magician presents a quart bottle partly filled with milk and places his hand or a piece of cardboard over its mouth so that he can turn the bottle upside down. Naturally, you expect the milk to stay put as long as the mouth is covered, but when the magician takes his hand away, the milk still remains!

To prove that some such force as magnetism holds back the milk, the magician pushes a long pointed object—such as a hat pin, wire cake tester, or thin meat skewer—up into the bottle until its tip appears above the milk level (Fig. 1).

Then, to show there is no trick about this phenomenon, he commands the milk to flow from the bottle—and it will pour out into a handy bowl or pail until the bottle is empty.

Yet the magician can halt the flow at any time and "magnetize" whatever milk is still in the bottle.

The Secret is almost as surprising as the trick. All you need is a small disk cut from a scrap piece of screen wire as in Fig. 2A. Either metal or plastic screening will do, but it's important that you cut it for a press fit with the inner ledge (Fig. 2B) provided on most milk bottles for a paper cap.

Face your audience with the empty bottle—screen disk lodged firmly in place—and a pitcher of milk at your side. Pour enough milk to fill the bottle about three-fourths full. It will pass through the screen readily.

Now turn the bottle over boldly, keeping your hand or cardboard pressed tightly over its mouth. When you remove your hand, the screen will retain the fluid as long as the

MATERIALS LIST—MAGNETIC MILK

No. Req.	Size and Description
1	quart milk bottle
1 pc.	1⅝" dia. metal or plastic screen wire (screen disk) (modify dia. to match that of paper cap supplied with bottle)
1 pc.	3 x 3" stiff cardboard or corrugated paperboard
1 pc.	1' wire or skewer or cake tester thin enough to pass through screening
1 qt.	milk, water or combination of both (see end of text)
1	quart-size pitcher

bottle is held with mouth straight down. There are a lot of air holes, but all are too tiny for the milk to flow.

Select a wire or skewer thin enough to pass through the mesh and extend it up inside until you can see it break through the milk line (Fig. 2C).

To Start the Flow, merely tilt the bottle at any angle and the milk will gush out into the pitcher (Fig. 2D). To stop it, simply cover the mouth and invert the bottle again. You can repeat this operation at any milk level.

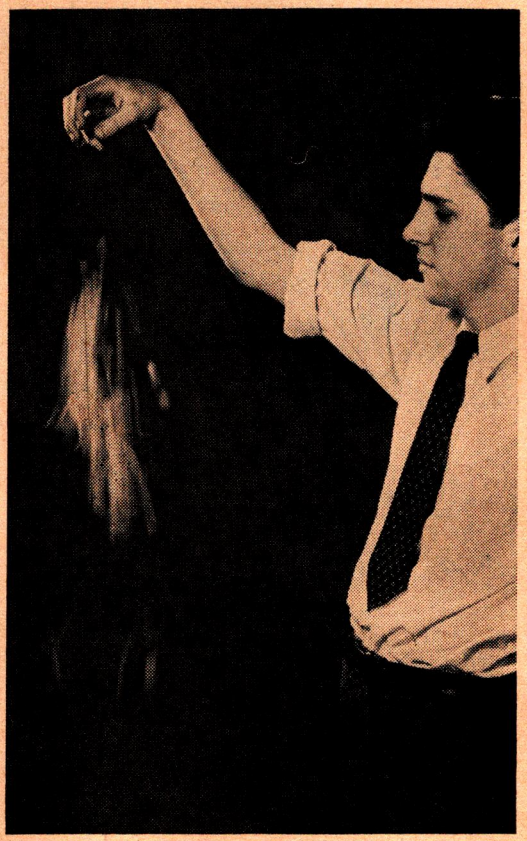
There are no tricks of any kind. You are demonstrating a seemingly magical power which is actually a clear example of surface tension or capillary action.

If you wish, water may be used instead of milk. But better yet, dilute milk with water about 50%. You will waste little milk and your performance will still seem authentic.

Dry Sand

• A handful of sand poured into water comes out just as dry as it went in! How? It's an old Hindu trick that is extremely simple. The sand has previously been heated in a pan and then moistened thoroughly with the smallest possible amount of melted paraffin wax. When cold, and placed in cold water, the waxed sand repels the water. If you lift the sand slowly from the dish, the surface water will drain off completely.

Confetti from an Egg

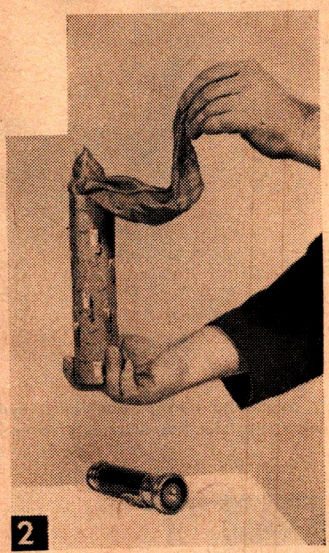


• Take an egg from a box of them, hold it aloft, crush it in your hand, and let it fall to the floor. To everyone's surprise, what falls from your hand is not an egg at all, but a cloud of confetti!

The egg must be prepared, of course. Its contents must previously have been removed by making a ¼-in. hole in one end and a smaller one in the other, and blowing through the smaller hole. After the shell has dried, fill it with confetti and seal the holes with paper to match the color of the shell. If you crush the egg thoroughly when performing the trick, the fragments of shell will fall with the confetti and not be noticed.

Flash Production Tube

★ **A smooth-running trick especially suited where critical eyes are "up close"**



Dropping flashlight at left seems convincing evidence that tube is empty, yet moments later, silks pop up in the tube (right). Finger at left points to the reason. Hook holds back a fake tube after successful switch from flashlight; then right second finger pokes up silks from the "load." Hook and finger movement should be concealed.

OFTEN the amateur magician is forced to perform at closer range and under more exacting conditions than the professional. As a result, he must occasionally add some convincing feature to a trick in order to impress his audience. So, when he can employ a clever device to help along the deception, he may have an almost perfect trick. This one is a case in point.

The magician shows an ornamental tube as in Fig. 1. To prove that this is almost empty, he holds it close to the eyes of the spectators, then aims a flashlight through it, probing the whole interior. He even pushes the flashlight completely through the tube, demonstrating its emptiness all the more. Then, at the same close range, he holds the tube upright and produces three silk handkerchiefs from it as in Fig. 2.

Just a Few Inexpensive Props needed are shown in Fig. 3: a cheap two-cell flashlight with small-diameter lens (under 2 in.) and a case having removable ends; a one-cell miniature flashlight, a section of mailing tube, a smaller tube you can fashion from light cardboard, and a ¼ x 2½-in. soft metal strip.

The big flashlight is actually a dummy (Fig. 4A) consisting only of the barrel and the screw cap holding the glass lens. Cement the glass lens into the cap to hold it in place. Next, cement the lens of the little flashlight to the center of the big lens so that the midget flashlight will be held in position (Fig. 4B).

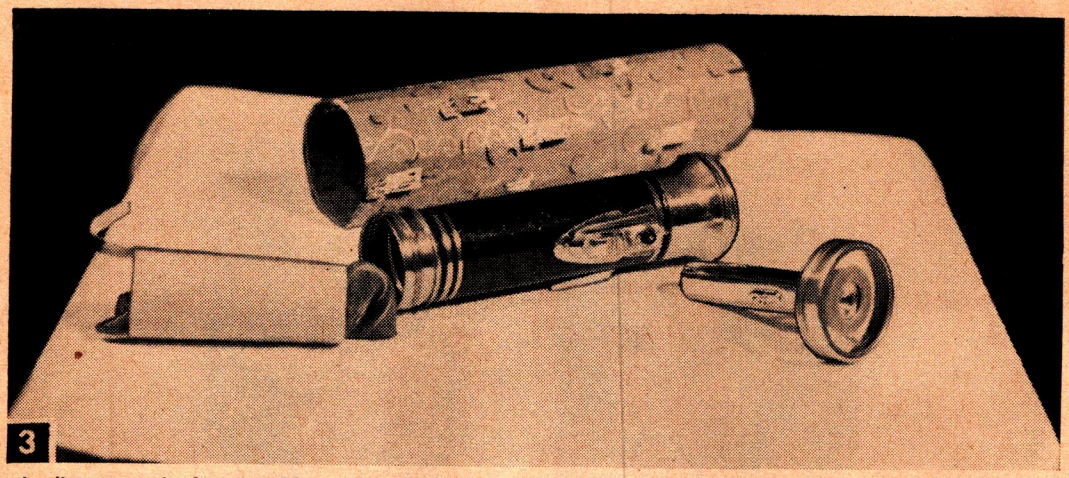
The large tube is shaped as in Fig. 4C and needs no other preparation except for covering with a fancy gift wrap paper as in Fig. 3. Or you could substitute two broad bands of silver paper, one around each end. The small tube, not seen by the audience, serves as a "fake," or "loader." Roll up a strip of light cardboard to form a 1½-in. dia. tube 3 in. long and attach the metal strip to one end of the tube as in Fig. 4D, taping 1 in. to the tube and letting 1½ in. extend beyond it. Bend down 1 in. of the extended strip to form a hook at an angle of about 30°.

When Ready to Perform turn on the midget flashlight and screw it to the lens cap attached to the big lens, then screw the big lens cap in place. The big dummy will look just like a regular flashlight powered by its own batteries.

Press three silk handkerchiefs into the tubular "fake" one by one, with their corners intertwined. Insert the loaded fake in the lower end of the dummy flashlight, so that it hangs there by the hook when the flash is inverted as in Fig. 4E.

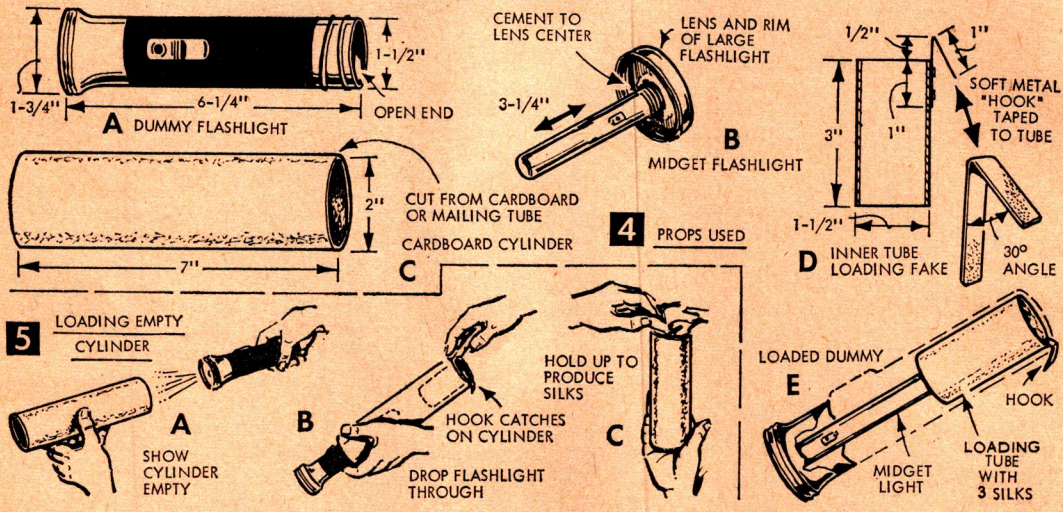
MATERIALS LIST—FLASH PRODUCTION ON TUBE

No. Req.	Size and Description
1	2-cell flashlight (dummy flashlight) should have small dia. lens and openings at each end
1	1-cell midget flashlight (light for the dummy)
1 pc.	2" dia. x 7" mailing tube (production tube)
1 pc.	3 x 5" light cardboard or use 1½" dia. mailing tube (fake)
1 pc.	¼ x 2½" soft metal strip (hook for fake)
3	silk handkerchiefs
Misc.	ornamental paper for production tube, glue, cement, tape



3

Appliances ready for assembly: midget flashlight cemented to glass of large light, empty barrel of the large flash ready for screw-on cap, silk handkerchiefs in special fake ready to be hooked inside barrel. Production tube is in background.



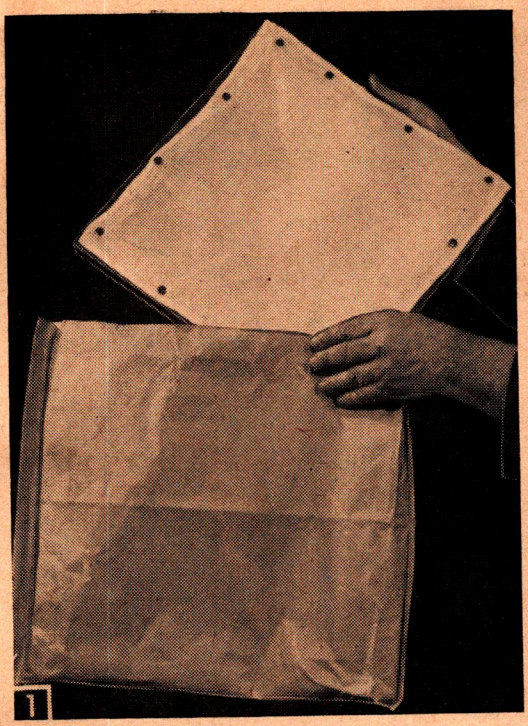
Greet your audience with the large decorated tube in one hand and the lighted flashlight in the other. Or, if you have an assistant, let him load the flashlight while you are showing the large tube, so he can bring the flashlight when you call for it.

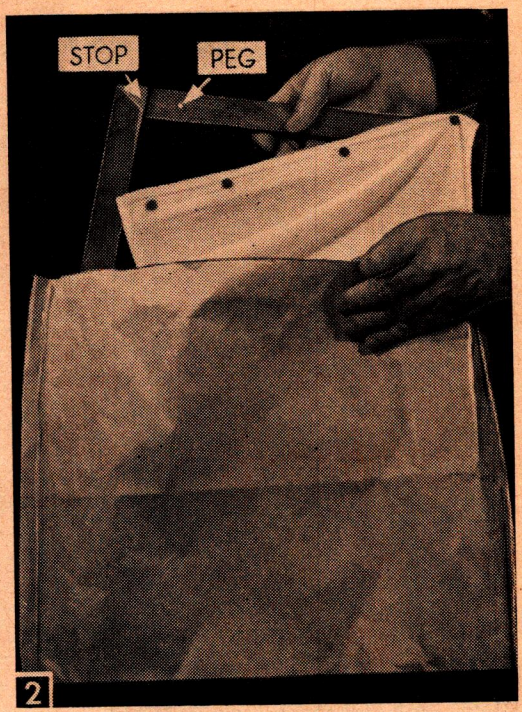
In either case, keep the lighted end of the flashlight lowered and make sure that the metal hook is projecting from the back of the other, or "open" end. Now raise the flashlight and shine it directly through the ornamental tube (Fig. 5A). Hold the tube in your left hand and the rear end of the flashlight with your right. The hook at the bottom should be concealed by the right thumb and fingers.

Push the Flashlight farther into the tube, saying, "You can see for yourselves that the tube is absolutely empty," and with that, tilt the tube 45° forward, letting the glowing flashlight slide through as in Fig. 5B. Bring your left hand up to catch it and lay it aside, still lighted, or hand it to a helper. During the slide, the hook will catch on the upper edge of the ornamental tube as in Fig. 1 to hold the fake within the tube. Grip the upper end of the tube with your right fingers and press the soft metal hook against it with your thumb, completely hiding the hook.

At this stage, turn your right palm upward, bringing the lower end of the tube to the top as in Fig. 5D. Push your right middle finger up into the fake, forcing the silks upward. With your left hand draw them one by one, from what is now the upper end of the tube. After the production, lay the tube aside, with the fake still inside, or lower tube to a table well and drop the fake there.

Unless you have an assistant, be sure to lay the flashlight behind a screen, or in some out-of-the-way spot after finishing the trick. This will give you time to twist off the lens cap and turn off the midget flashlight inside.





As handkerchief and frame are placed in the bag, as in photo at left, right hand is in position for forefinger to push movable arm of top frame member off peg and away from stop. Once in bag, thumb can push movable member farther down, removing handkerchief from area of penetration. In photo at right, after movable arm is freed, handkerchief is carried down with it, with dummy tack on left side (out of view) allowing more leeway. This action should not be started until entire frame is in the bag.

The Amazing Penetration of Solid Through Solid

★ Borrowed handkerchief takes terrific beating, yet is returned unharmed to its owner

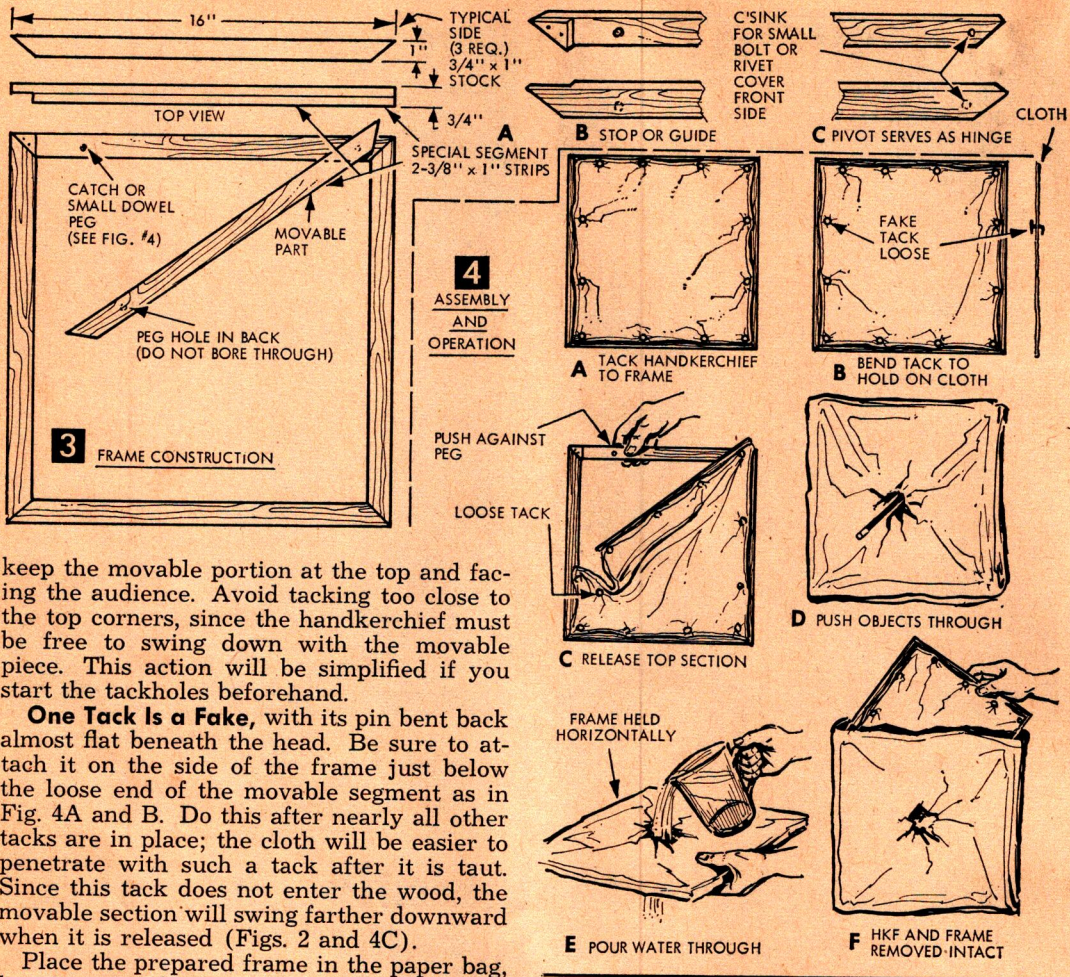
THE magician who borrows something solid from a volunteer, mistreats it and returns it unharmed to its owner, creates a fascination for magic that never seems to end. You know that what he is doing is actually impossible and you feel confident that the material will be brought back in good condition—but how it's done has always been a mystery.

There's a scientific slant to such tricks, of which a good example is the borrowed linen handkerchief stretched on a frame. When the frame is inserted into a paper bag just large enough to receive it as in Fig. 1, the magician holds it in full view and pierces the paper with his wand, pulls ribbons through it, punches his fist through it, and finally pours water through its center into a bowl below. When he withdraws the frame, the handkerchief is still there, wet but undamaged—proving that the solid objects must have penetrated the cloth.

The necessary apparatus is simple to make and costs only a trifle.

A Special Frame Construction holds the secret. It's conventional in general appearance with ¾ x 1-in. stock making up the 16-in. sides as in Fig. 3—except that one side is formed of two strips of wood which are only half as thick as the other sides (Fig. 3A). Fit the top half loosely to the other part, with a stop at one end (Fig. 3B) and a pivot which also serves as a hinge at the other (Fig. 3C). This movable section will swing down past the center of the frame as in Fig. 3. You can use a peg or small catch to hold it in the normal closed position, which is the only way the audience sees it. Glue and nail frame pieces together.

Now find your volunteer and attach his handkerchief to the frame as in Fig. 4A, using four thumbtacks to a side, and as you do it



keep the movable portion at the top and facing the audience. Avoid tacking too close to the top corners, since the handkerchief must be free to swing down with the movable piece. This action will be simplified if you start the tackholes beforehand.

One Tack Is a Fake, with its pin bent back almost flat beneath the head. Be sure to attach it on the side of the frame just below the loose end of the movable segment as in Fig. 4A and B. Do this after nearly all other tacks are in place; the cloth will be easier to penetrate with such a tack after it is taut. Since this tack does not enter the wood, the movable section will swing farther downward when it is released (Figs. 2 and 4C).

Place the prepared frame in the paper bag, keeping movable portion at top. Hold bag with your left hand while the right thumb and fingers release the hinged piece and push it well downward (Fig. 1). Now, take a pencil and thrust it through almost at the center as in Fig. 4D, penetrating the paper front and back. Push your magic wand through, plus any handy silk handkerchief, ribbon, candle, or even a ruler. You may even poke your right hand through, clear to the wrist.

Prove that the handkerchief is still in place by turning the bag to a horizontal position and pouring water through it as in Fig. 4E. As you take away the right hand from its position in the hole, simultaneously tilt the frame forward and then downward with your left, turning it edgewise toward the audience. This causes the movable piece to fall back into normal closed position. Pick up a water pitcher, hold frame horizontally over a bowl, and pour through the bag. Thus, the handkerchief is back in place and the water passes through it.

Removing the Frame. Lay the pitcher aside with your right hand and reach into the bag to remove the frame (Fig. 4F). In so doing, draw the hinged portion back until peg and the stop hold it in its original position. Then take the frame out of the bag and show it to the audience. Call their attention to the wet handkerchief and the fact that it is firmly attached to the frame.

Then remove the thumb tacks and return the handkerchief to its owner. Drop the one fake tack into a box with the rest and it will not be noticed. Lay aside the frame and the mystery is complete.

Note: You can lock the movable portion of the frame in position, when not in use, by simply pushing a thumb tack into a pin hole at the extreme corner of the movable strip. The tack should penetrate into the little stop that serves as a guide for the movable portion.

MATERIALS LIST—SOLID THROUGH SOLID

No. Req.	Size and Description
1	men's linen handkerchief
1 pc.	¾ x 1 x 60" wood strip (3 frame sides)
1 pc.	⅜ x 1 x 36" wood strip (movable side pieces, stop)
1	½" bolt and small nut or rivet (pivot-hinge)
Misc.	small wooden peg, 4d nails, doz. thumbtacks, paper bag just large enough to enclose frame

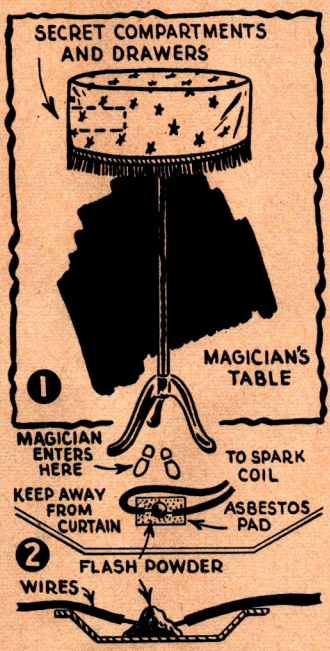
CHEMICAL MAGIC

Pep up the party with simple surprises from the chemist's bag of tricks—and add to your understanding of chemical reactions at the same time

By RAYMOND C. CRIPPEN

FOR many, many years magicians have used chemical experimentation in their programs. You may have seen the trick where the magician enters the stage after igniting a charge of flash powder to make it look as though he emerged from the flash. Other magicians use small explosive charges for effects, chemical solutions for changing water into almost anything and chemicals for smoke effects. The use of chemicals for "magic" has been known since ancient times. Many an alchemical magician has fooled his public into thinking he could turn iron into gold by dipping the iron in a copper solution and plating the iron with "gold-like" copper.

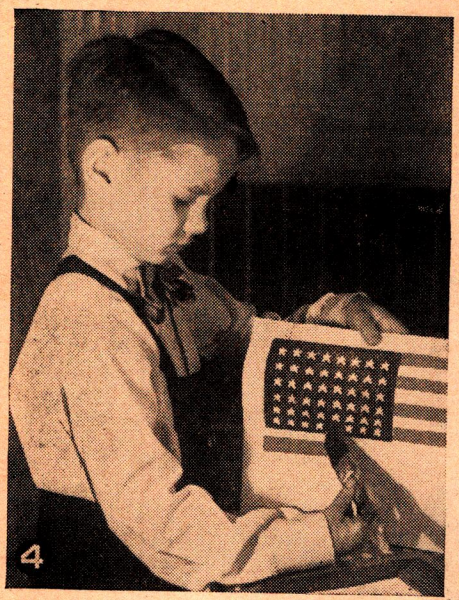
In planning a chemical magic show it is good to follow some theme throughout. If it is a patriotic celebration, repeat patriotic colors or themes during the program. Also consider the type of audience. A program planned entirely for children would be very uninteresting for adults, one for adults would be tiresome to children; an audience of men would not be interested in a mixed audience program. Time your individual tricks. Know exactly what you are going to say, but don't have your program planned so carefully that if something goes wrong, it throws you off entirely. Have another trick ready or have a second set ready of the same stunt.

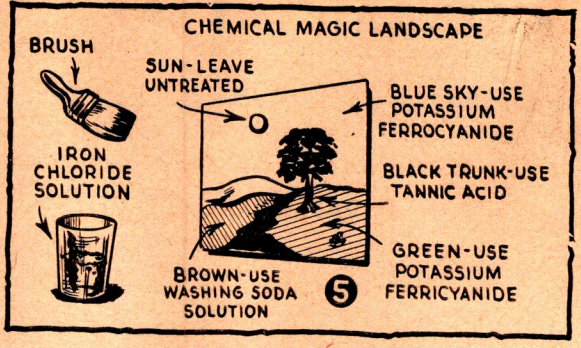


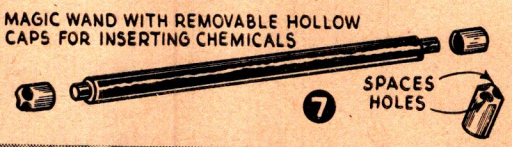
In these experiments, follow instructions exactly. Modify the experiment only after you understand the chemical reactions involved. Use magicians' tables on which to perform these tricks, small circular tables on a tall pedestal, which are available at most magic shops (Fig. 1).

Magicians' Flash Powder. Mix carefully two parts magnesium powder, one part powdered potassium nitrate and one part powdered sulfur by rolling on paper, lifting alternate corners of the paper until "rolled" into a uniform mixture. *(Caution: Do not grind.)* Then pour a *small* quantity of the mixture onto the lid of a tin can placed in the center of the stage and ignite the mixture using an electric spark from a Ford spark coil (Fig. 2) or doorbell transformer. Step through smoke immediately after the flash to produce the effect of appearing from the flash. *Make certain that sparks do not fly onto flammable materials; have a fire extinguisher or a bucket of sand or water ready in case of emergency.* If more smoke is desired, add a little ammonium chloride in the amount of one part to the above mixture and incorporate by rolling as before. For colors, add a little strontium or lithium nitrate in the amount of ½ part for red; ½ to 1 part of copper nitrate to make green-blue; ½ part sodium nitrate for yellow; one part calcium salts for orange; and ½ to 1 part barium or zinc nitrate for green. Incorporate color ingredients also by rolling—do not grind. If material is coarse, grind separately and incorporate by rolling.

Great Smoke Mystery. Show your audience two empty glasses; invert one, putting rims together; cover immediately with handkerchief. Blow smoke from a cigar, cigarette or burning paper toward the glasses. Remove handkerchief, and smoke will be found in the glasses (Fig. 3). Trick is done by putting a few drops of strong ammonia in one glass and a few drops of strong hydrochloric acid in the other. *(Do not drop acid or ammonia on clothing or skin;* in case of accidental contact, wash off with water.) Cover mouths of glasses with a small piece of glass before the performance but have it removed by an assistant immediately before the act or before trick is brought on stage by assistant. Keep







glasses well separated, otherwise they will "smoke" before you are ready for them. Cover upper glass before placing rims together; smoke forms immediately. Practice trick until you have it mastered. A variation is to rub the hands together, each containing a drop of dilute acid and ammonia (mixed 50-50 with water). Wash hands after trick.

Magic Flag. Show audience a blank sheet of paper. Using a brush, coat paper with "polka-dot and striped paint," to reveal a magic flag (Figs. 4 and 5); you can vary the trick by showing a picture, or magic messages. To do this trick, paint paper beforehand in the flag or other design desired—using the red-producing solution for the red stripes, blue-producing solution for the star background, and leave untreated the areas for the white stripes and stars—then dry paper thoroughly. To make solutions, dissolve 1 oz. of each of the following chemicals in separate pints of clear water: for red, ammonium or potassium thiocyanate; for blue, potassium ferrocyanide; for brown, washing soda; for green, potassium ferricyanide; for black, sodium sulfide or tannic acid; for white, leave areas untreated. To bring out the original design from the white sheet of paper, use "paint" made from a solution of 1 oz. of iron (ferric) chloride in 1 pint of clear water and apply with an ordinary soft brush or spray on with an ordinary atomizer. The flag or original design magically appears with each stroke of the brush, or spray of the atomizer. If the "paint" is not perfectly clear, add a few drops of muriatic (hydrochloric) acid to the solution. *Rinse brush or atomizer out carefully with water and clean all brushes with clear water after use. Discard solutions after you have no further need for them as some of them are dangerous in the hands of children or persons who know nothing about them.* To make the trick very effective, the water "paint" used should be practically colorless and the paper should look like it has been untouched. Use a rough paper of high rag content.

The trick may be varied to show a painted summer landscape which, on heating over a warm electric iron or hot plate, turns to a winter landscape of the same scene. In this case use saturated (dissolve crystals until no more will dissolve) solutions of copper sulfate for the blue sky; cobalt acetate or nitrate, for pink; nickel sulfate for green. The brown tree trunks, red houses and barns, and other non-seasonal landscapes can be painted with ordinary water colors. On heating the "summer" landscape, the grass fades to near white, the blue sky changes to a white "snowstorm," and the trees and shrubbery become covered with "snow." Simply exposing the landscape to the vapor of a boiling tea kettle returns it to its original "summer" scene. Even the moist breath will do it.

Magic Pitcher. For this trick, place a few drops of a strong saturated solution of any of the

8

chemicals mentioned in the above section in separate "empty" glasses. Pour the solution of 1 to ½ oz. of iron (ferric) chloride contained in a clear glass pitcher (if not a clear solution—add a few drops of hydrochloric acid) into the "treated" glasses. A different color is produced in each glass: "grape juice" or "blue ink" from potassium ferrocyanide solution; red "wine" from ammonium or potassium thiocyanate; white "milk" from silver nitrate; reddish-brown "tomato" juice from washing soda or lye; greenish "lime-ade" from potassium ferricyanide, etc. You can occasionally pour out clear water by using an "untreated" glass, heightening the effect of the trick (Fig. 6). After you are done with the illusion, wash out all glasses and pitcher carefully and discard all solutions to prevent subsequent contamination of "real" drinks.

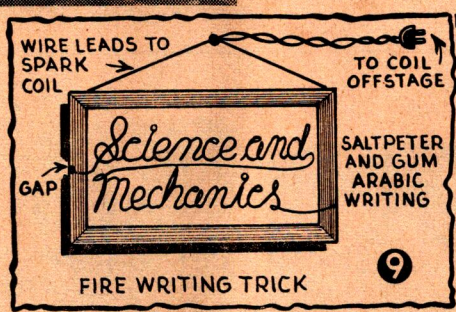
A Magic Wand can be made (as shown in the diagram Fig. 7) either from wood or plastic, with removable metal or plastic tips, by turning down the wand on a lathe and fitting on the tips.

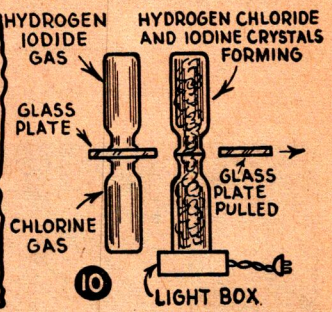
In using the wand, insert a few crystals of potassium permanganate in the marked end of the wand. Insert a pellet or a few large crystals of sodium bisulfite in the other end (unmarked end). To change water to "wine," stir the water with the marked end until the desired color is obtained. To turn it back to water again, stir it with the unmarked end (Fig. 8).

Many variations are possible. Change "port" wine to "sherry" by using tannic acid. Using salt in the water and a crystal of silver nitrate in one end of the wand (marked end), "milk" may be made which may be turned back to water with a crystal of hypo in the other end of wand (unmarked end). Make ink by using iron (ferric) chloride in the water and a crystal of potassium ferrocyanide (blue ink) or a pellet of tannic acid (black ink) in the wand. Various dyes can also be used that may be bleached with sodium bisulfite.

Make the tablets of chemicals for the wand by moistening the chemicals with a little dextrine and compressing into tablets in a metal hand tablet press by striking with a hammer; you can have your pharmacist make them into tablets. Dry them, and then insert into your wand tips. When stirred into solutions, the chemical slowly dissolves and produces "magic" chemical changes. Mark wand with colored dots or notches for identification. One wand is used for each experiment. Make certain all equipment is cleaned before using.

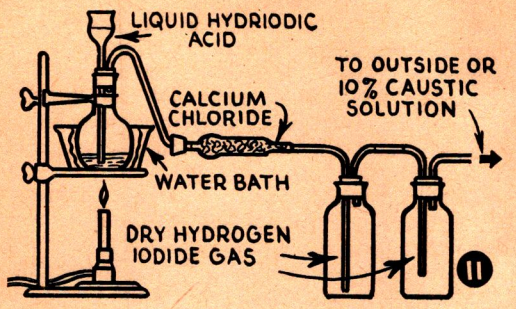
Fire Writing. To read a person's mind or have them ask a question in such a way that the "message" magically burns on a paper by a wave of the magician's wand, write on a sheet of plain white paper with a brush soaked in a *saturated* solution of potassium nitrate and gum arabic. Be sure to connect all writing continuously, allowing a place at the side to ignite the writing. Thoroughly dry paper. Mount in a frame and suspend by wires. Writing may be ignited with a spark coil using each side of the picture wire as a lead or simply by any system that produces a low amperage spark—a match may also be used. You can have the stunt as a mind reading act, a fortune telling act or whatever the occasion may demand. (Fig. 9.) If writing burns too slowly, speed it up by incorporating equal parts of potassium chlorate and powdered white sulfur into the original solution, mixing these into the gum arabic and potassium nitrate solution before application with a brush.

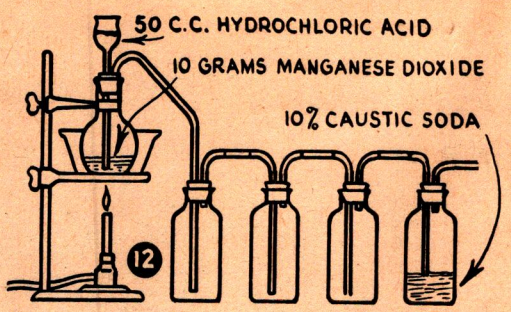




The Floating Crystal Trick is most effective if it is performed on a slightly darkened stage by placing the cylinders of gas on a light box that throws its light upward through the cylinders (Fig. 10).

In the upper cylinder displace the air with dry hydriodic acid gas, obtained by boiling liquid hydriodic acid and passing the vapor through a drying tube of anhydrous calcium sulfate or chloride (Fig. 11). Cover cylinder with a glass plate when filled with the gas (tested with moist

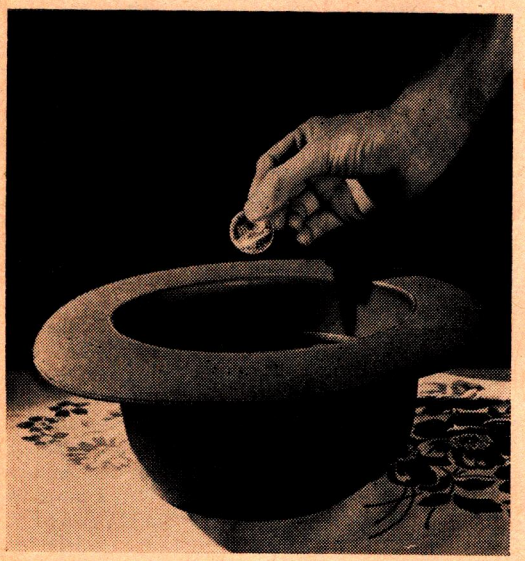




litmus paper, it turns red). Into lower cylinder pass chlorine gas obtained by heating manganese dioxide and concentrated hydrochloric acid (Fig. 12). Also cover this cylinder with a glass plate. *(Caution: Do not breathe these gases. Prepare them in a well-ventilated room or outdoors. Absorb excess in sodium hydroxide solution. If quantities escape into the room, cover mouth and nose with a wet pad of hypo crystals and open all windows—leave area until odor is gone.)*

To demonstrate the trick, invert the glass-plate sealed hydrogen iodide gas over chlorine gas cylinder on the light box. At a given signal, pull the glass plates and reseal the cylinders mouth to mouth. Immediately, clouds of smoke form and a vigorous looking reaction takes place; beautiful black and silvery crystals of iodine float around in the gas and sparkle and scintillate in the light as they float downward. Wash cylinders out with water after use.

Hot Money?



• It is easy to pick a marked coin from a hat with your back turned and without ever seeing it. Place a dozen coins of the same denomination on the table, have someone mark one while your back is turned, and let him pass it around so all in the group may inspect it. Then have him place all the coins in a hat, and pick out the marked one.

How can you tell without looking? Simply by its change in temperature. Handling by your friends will make it warmer than the other coins. If the room temperature is normal, the difference can be readily detected.

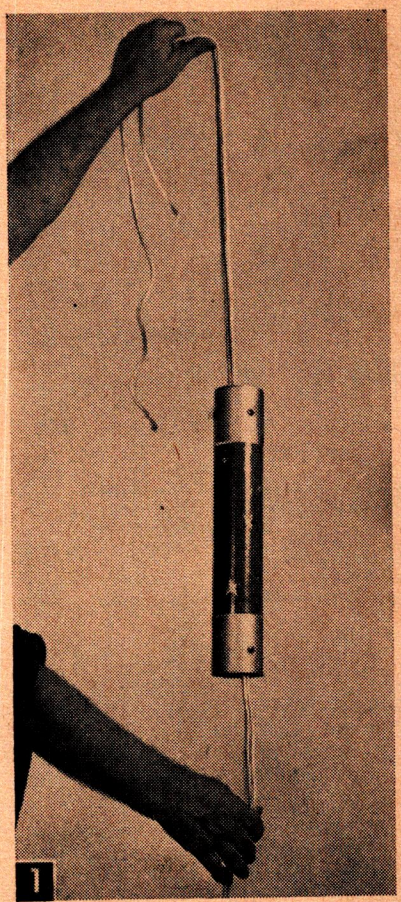
Pocket Mind Reading

• You can read minds by putting two cards from a deck secretly into your pocket. Take three from the deck and have a friend select one mentally. Put the three in your pocket, and remove the two already there, returning them to the deck without showing their faces. Say that you now have in your pocket the selected card. Have your friend name his card, and produce it for him. You have, of course, memorized the order of the three held.

Double-barreled mystery—

The Tube and the Ropes

★ The tube rises and falls upon command, then comes off the ropes



At a word of command—aided by a firm pull—the tube begins to rise on the ropes.

A SINGLE tube is used in this surprising trick, but it provides a double mystery. A particular value of this trick is the fact that very simple and innocent-looking equipment is made to do some remarkable things.

A 15-in. mailing tube, composed of ¼-in. material and 2½ to 3 in. in diameter, is suitable. Dimensions are optional, but the tube must be long enough, wide enough, and thick enough to fulfill the demands of the performance.

Two thin ropes run through the tube, apparently side by side (Fig. 2); the ropes should be 6 ft. or more in length. Sash cord is a good material for this purpose.

The Mystery. The magician shows the tube dangling horizontally on the cords, which he holds at arm's length (Fig. 3). Then he turns it vertically, and the tube hangs suspended upon the ropes.

Gradually, the tube begins to slide down the ropes—which is natural. Finally, it stops and, at a word of command, begins to rise—in the same mysterious fashion. This may be repeated a number of times.

The magician then lets the tube dangle, horizontally again (Fig. 3), and hands two ends of rope—one from each end of the tube—to a member of the audience. He takes the other ends and gives them to a second person (Fig. 4). Holding the tube in his hands for a moment, the magician tells his helpers, "Pull!" As they do, the tube immediately drops from the ropes, leaving everyone more mystified than ever—particularly when they find that the ropes are quite ordinary, just like the tube.

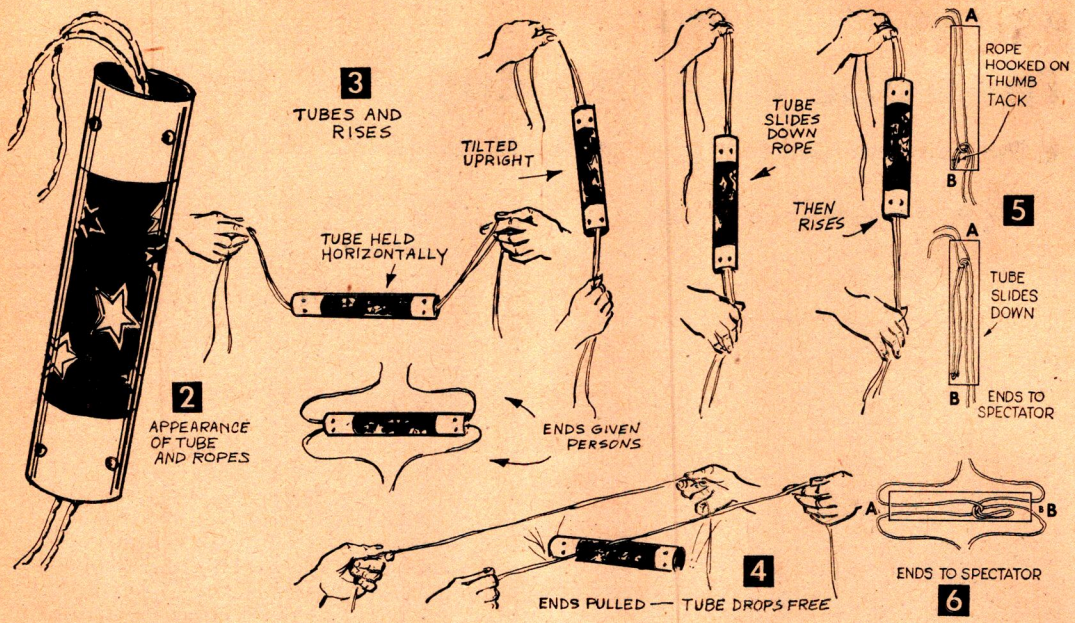
Of course, the tube is not quite ordinary. It is decorated with colored paper and covered with stars, of various colors. Around its ends are bands of silver paper, held there with brass studs, on the outside and inside (Fig. 2). These studs are actually brass-headed thumbtacks that go only part way through the thick cardboard. One thumbtack, on the inside, is the gimmick.

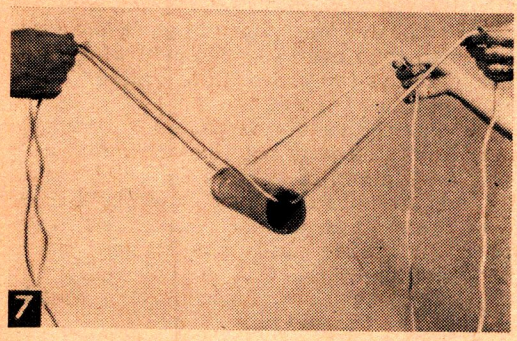
To Fix the Tube for the trick (Fig. 5), double rope "A" in half and push its looped center in through the left end of the tube, which will be termed end "A." This is the unprepared end of the tube. Push the center of rope "A" almost through to end "B."

Now double the center of rope "B" in the same way. Push it in from end "B" and run it through the loop of rope "A." Then bring it back toward end "B" and hook it over a thumb tack, which is pushed part way into the wall of the tube, about 1 in. from end "B." Draw the ends of rope "A" a few inches to the left, and the tube is set to go.

In Presenting the Trick (Fig. 3), pick up the ropes by the ends and let the tube hang horizontally. Now tilt end "A" slowly upward until the tube is almost vertical. The tube will slide downward of its own weight, although the friction of the ropes tends to prevent this. Shake the upper ends (A) slightly and relax your hold on the lower ends (B) to facilitate the slide.

To stop it, simply pull on both ends, which





Hand one end of rope from each end of the tube to each of two members of the audience. When they pull the ropes, the tube will fall away.

MATERIALS LIST—TUBES AND ROPES

No. Req.	Size and Description
1	mailing tube, 15" long x ¼" thick x 2½ to 3" dia.
2	6' lengths of sash cord
Misc.	colored paper, brass-headed thumbtacks

acts as a brake. Pull still harder, and the tube will climb upward on the rope in a surprising manner. Again relax, and the tube will descend; pull the ends, and it rises.

The ropes shorten as the tube goes down and lengthen as it rises of course, but this is not noticeable, any more than the action of the hands when the tube is rising; provided, of course that a long tube is used, with plenty of rope.

The main thing to guard against is letting the tube slide down too far, so that the loop comes out the top. This can be prevented by keeping the tube low enough to look into while it is sliding downward. You might put a dab of ink on rope "A" to indicate the danger mark. When the dab appears above the tube, don't let it slide farther down.

Off the Ropes. After repeating the "rising tube" portion of the trick several times, let the tube tilt back to its original horizontal position. Approach someone in the audience and give him one rope extending from end "A" and one from end "B," telling him to hold one in each hand (Fig. 6). Then give the other two ropes (A and B) to a second party. Have the two persons stand well apart, while you take the tube by the ends, in order to balance it.

This enables you to slip your fingers inside end "B" and loosen the rope from the thumbtack. Tell the two helpers to pull hard on the ropes. When they do, the tube comes off (Fig. 4), and you can either swing it upward triumphantly, showing it so everyone can look through it, or let it fall to the floor when the ropes come clear.

When releasing the hooked loop, you may push the thumbtack all the way into the wall, so that it will look exactly like the others. This is seldom necessary, however, as the tube looks innocent enough, and you can always keep a finger over the projecting tack when showing the tube empty.

An alternate plan is to have only one thumbtack—the special one—inside the tube. In working the loop off the tack, pull the tack free with it, and retain the tack in the hand, dropping it unnoticed on the floor after the climax.

ESCAPES—Special Form of Magic

★ **Problems Houdini and Hardeen faced as escape kings—How magicians free themselves from handcuffs, straitjackets and other restraints**

Author with array of handcuffs, shackles, etc., nearly all from original Houdini-Hardeen collection. He holds cuffs which Houdini said he would open after death—if he could return from spirit world. Mediums have tried and failed to "materialize" Houdini's spirit at seances to which cuffs have been taken. The challenge is still open. In center foreground are the famous Guiteau handcuffs, named after President Garfield's assassinator, who was imprisoned in them.

By SIDNEY H. RADNER

ESCAPING from handcuffs, shackles, and various other contrivances including torture devices, is really a business in itself, and should be so treated. It requires special knowledge as well as skill, and can turn out to be very strenuous. So unless a person has a liking for this work, and the time and money to devote to it, he should specialize in some other form of magic. Otherwise, he will run into trouble.

Take the case of Houdini. One reason he decided to become a handcuff king was because he liked locks, and actually worked as a locksmith during his youth. All kinds of handcuffs and restraint devices (Fig. 1) interested him. He collected them, studied them, looked for their weak spots and found them (Fig. 2). His brother Hardeen had the same flare, and became a famous escape artist, too.

Houdini's home was like a workshop, and so was Hardeen's, because of the many tools and gadgets that they required. When they went on the road, they carried trunks loaded with all sorts of cuffs, keys, picks, and whatever else might be required to meet emergencies as they arose.

The moment anyone announces himself to be an escape king—the way Houdini and Hardeen did—he is sure to meet with challenges. Sailors will want to tie him up with ropes. Police will offer to lock him in handcuffs and throw him into a jail cell to see if he can get out. People will build boxes to confine him in, and they will show up with straitjackets and such things, hoping that they can hold him.

Authority for Specialists. Remember that

Pictured here for the first time is Houdini's key impression box with the original dental-type wax material he used to copy a key he might borrow or secretly obtain for a few moments. Impression was his model for duplicating the key.

The "Siberian" chain escape, actually used by German police for handcuffs, is a 2-ft. chain with two similar rings spaced 4 in. apart at one end. Long link facilitates threading and locking. Radner demonstrates correct way to use it as a handcuff.

as an escape king, you are trying to outwit people who are specialists in their own right. It was that way even before Houdini's time, so he ran into the situation head on. He had to know more about locks than most locksmiths; more about handcuffs than the police, or even the people who manufactured them. At that, Houdini and his brother Hardeen still would have been confronted with disaster, except that both were powerful physically, and able to apply their strength as needed, when bound in some formidable way.

All this does not mean that the aspiring magician should give up any thought of escapes. It is just the opposite. Escapes are part of magic. They are good in any show. The important thing is to present them as special features, either in the course of an act, or as an added attraction afterward.

By concentrating on a single escape, you can set the conditions, and even the materials. Instead of having a girl appear in a cabinet, you may allow yourself to be locked in a box, from which you manage a mysterious escape. That is the general idea of it.

Handcuffs play an important part in escape work, because they are common articles, and supposedly are difficult to shake off. Here, the escape king trades upon the ignorance of his audience. Handcuffs—if you know them! —are not so tough as they seem; that is, certain patterns of cuffs. Those, of course, are the ones you should carry with your act.

Handcuffs Serve Two Purposes in magic. You can work them by themselves, or use them in connection with some other escape. If locked inside a box, you can first be handcuffed, adding that much to the act.

An important secret of handcuff work is that all cuffs of a given pattern can be opened with the same key. Unlike padlocks, which are different, handcuffs are alike. If two police officers carry identical cuffs, one can lock up a prisoner, and turn him over to another, who can later unlock the handcuffs with his own keys.

Stories have been written about people getting locked in handcuffs and losing the keys, then having to go through all the trouble of having them sawed off. All they would really have to do, would be buy a pair of duplicate handcuffs, or borrow the keys for same. That's the way an escape king manages it when working inside his cabinet. Only he has the keys available beforehand. The cabinet, incidentally, is very important to escape work.

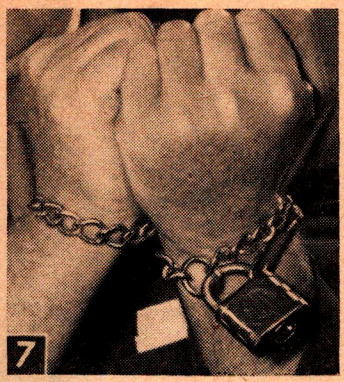
When inside a cabinet, the escape artist can

SIDNEY H. RADNER, magician, escapologist, and authority on gamblers and their methods, took up magic as a youthful hobby and decided to become an escape king while a student at Yale University. He met Hardeen, brother and successor of Houdini, who furnished him with many of Houdini's own handcuffs, locks, picks, and other devices, including the famous water torture cell, from which Houdini was the only man ever to escape.

Radner toured as an escape king and during World War II joined the US Army. He performed his escape act while in the service and was called upon by the Central Intelligence Agency to investigate crooked gambling in army camps. Later, he made a specialty of exposing such methods and, today, he is an outstanding lecturer in that field.

He has maintained his interest in escapes by adding to his unique collection of handcuffs and like paraphernalia, which is unsurpassed, particularly where authentic Houdini devices are concerned.

His collection, part of which is shown in Fig. 1, includes many rare antique irons which Houdini took on as a challenge, escaped from under the most exacting conditions, and kept for posterity. They give an idea of the arduous work and constant study required to become a successful escape king. To meet all challengers, a performer must be able to get out of all of these—and more!



After chain is firmly fastened to left wrist, with end ring up, it is swung around both wrists (left), drawn tight by a volunteer and locked (center). Radner works free of his bonds at right. Position of end ring at start is key to success of the trick.

get at keys and picks concealed upon his person or in the cabinet itself. He uses these to unlock the cuffs. Once out, he locks the cuffs again, puts away the keys, and comes out carrying the handcuffs still locked.

With his own handcuffs, the performer has duplicate keys all ready. He can give the cuffs for examination, or have someone in the audience bring them on the stage. In either case, they are genuine handcuffs. But the performer should use makes of cuffs which have locks that are reachable with the duplicate keys. Then the act is swift and easy.

Some standard cuffs are so shaped that the performer can't reach the lock with the key, when he is handcuffed. To get around that, Houdini and other escape artists invented special reaching devices, like strips of curved metal, to which the keys could be affixed. Master keys have also been devised to open various styles of cuffs. Special picks are used on others.

But all that comes under the head of advanced work. The performer working handcuffs as part of a magic act should make his task as easy as possible. If he can work in full view, so much the better. Perhaps the best device for this purpose is:

Left, picking one type of regulation handcuffs with a bent bobby pin.

Right, special split pick used for bean-style cuffs works on the ratchet through tiny holes. Skilled operator can use a bobby pin.

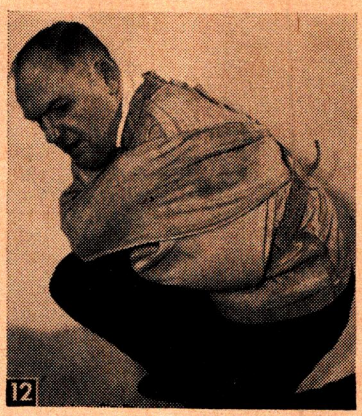
The Chain Escape. The restraint shown in Fig. 3 is actually used in Germany, though most magicians do not know that. They refer to it as the "Siberian" chain, and generally suppose that it was designed for escape work. But it really serves as handcuffs, and escape is virtually impossible if the chain is put on the right way, which is the "wrong" way from the performer's view.

A typical chain is about two feet in length and it has a ring affixed to one end link. Three or four inches farther along, another similar ring is fixed to another link. The chain can be thoroughly examined, along with a padlock that is strong but small enough to be locked through one of the regular links of the chain.

Put the chain around your left wrist as in Fig. 4, so that the end ring is on top when the thumb is upward. The chain should run over the back of the wrist, up the front and through the end ring, where you draw it tight. Then dangle it down inside the left wrist and press the right wrist against it as in Fig. 5.

With a Swing of Your Hands, throw the free end upward and over both wrists (Fig. 6), so it comes down in back of the left. Anyone may then push the loose end of the chain through the second ring and haul it back, so that it comes over the back of your right wrist. There, it is locked, by putting the padlock through two links of chain as in Fig. 7, one link near the loose end, the other link part of the chain girding the right wrist.

Before locking, the chain may be drawn tight, pressing hard into the flesh. Escape



Radner, a specialist of the strait-jacket escape, is shown working out of a regulation US Army jacket. At left, he is strapped with arms crossed in regulation style. Above, working for slack to get right arm over head. Right, right arm being worked over head, one of the most strenuous parts of the escape.

looks impossible, but with a quick turn of your back, or a mere up and down motion of your hands (Fig. 8), you can shake off the chain completely, and toss it for examination, padlock and all.

The secret is the way the chain is girded around the left wrist. Keeping the end ring at the top is the whole thing. When the chain is brought down between the wrists, that portion becomes slack. When it is locked as described, turn your right wrist inward to take advantage of the hidden slack. Then pull the right wrist free. That gives the left plenty of loose slack so the chain can be shaken off.

Take care not to let the end ring slip down from the top edge of the wrist, or the escape won't work. If that happens by accident, show that the chain is on good and tight, then shake it off before any one can apply the padlock. This looks as though it is just a preliminary demonstration. Have the chain put on again, and this time make sure it is "right" from your viewpoint.

The chain escape is a good one because a spectator can be locked in it before or after a performer's escape, but the spectator will be totally unable to get out. In locking him up, the performer draws the end ring down between the person's wrists, and that does it.

Simple Handcuff Escapes. Perhaps the simplest of all handcuff escapes is effected with the aid of such a trifling gimmick as a bobby pin, which is pushed down through two tiny holes to force the cuff open (Figs. 9 and 10). This point of vulnerability is found with certain types of standard handcuffs and is a good thing to know. You can turn away, and be out of the handcuffs quickly, even if using a borrowed pair.

Certain types of English cuffs can be opened by banging them against a hard object, which will cause the cuffs to spring open. This is usually worked inside the cabinet. With these—as with the cuffs previously described—the keyholes can be sealed, adding a new element of mystery.

But that is getting more into the specialty field, a thing to avoid at first. Generally speaking, the would-be handcuff king will do well to contact magical dealers who handle escape items and find out what they have to offer. He can then add new escapes to his act, one by one, sometimes supplanting old with new, or the other way about.

One of the best things about escape work is its attraction as a "special feature," which can even be called a "challenge" although it may not be exactly that. A performer can say that he will escape from "regulation police handcuffs" at the finish of his act, which he does, even though the handcuffs are his own. He can also "challenge" any one to prove that he does *not* use regulation cuffs. Also, he can arrange for persons to bring their own handcuffs, but to specify beforehand what they will be. In that way, the performer can supply himself with whatever keys he needs.

This is all the more reason to have a reliable source for escape materials, as otherwise it is possible to invest a fortune in gadgets and devices that may never be used. That was all right for Houdini and Hardeen, who

Left, sleeves over head and at front. Straps are loosened by hands through cloth, sometimes worked open with teeth. Right, peeling off jacket to complete escape.

made a career of it. But that was in the days of vaudeville, when such attractions were at a premium, with many repeat engagements. Today, an escape is more of a special stunt.

Of course, there are various "standard" escapes, and one of these is noteworthy because it can either be comparatively easy or extremely formidable, according to the equipment used. That is:

The Straitjacket Escape. This was first performed by Houdini and later by Hardeen, who introduced the idea of escaping from the jacket while hanging upside down, high in the air, a method which Houdini also adopted.

The fact that the audience may witness the entire process does not detract from this escape, but really makes it seem all the more remarkable. It is strenuous, no matter how you do it, and that impresses people. It also gives them the idea that all other escapes are just as hard, or maybe harder.

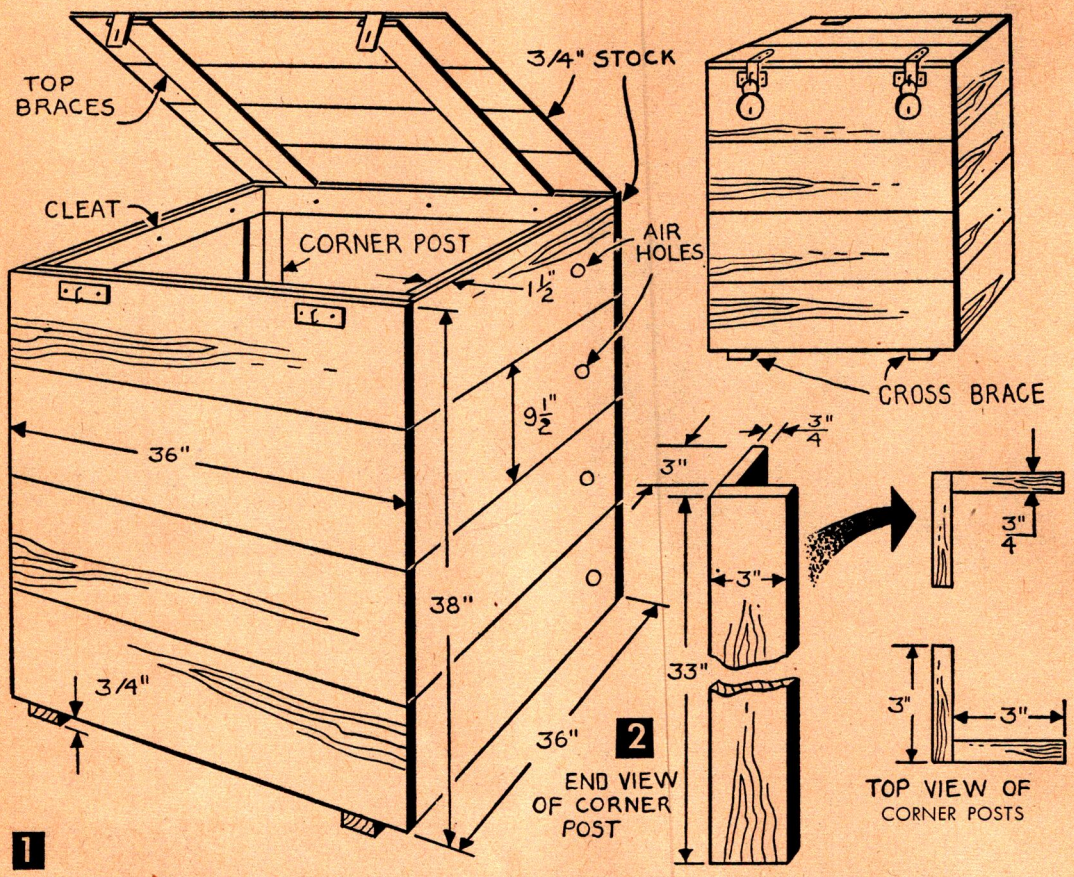
A straitjacket is a heavy jacket of canvas or leather, with two long sleeves in which a person's arms are encased. The jacket is then strapped up the back, and the sleeves are drawn tight by means of two straps in their ends (Fig. 11), these being brought around in back of the person and buckled there. The hands are completely encased in the sleeves, which have no lower outlets. Once strapped in a straitjacket, a person is supposed to be both helpless and hopeless. Straitjackets are used in prisons and hospitals for restraining the most violent inmates.

So it looks bad for the escape artist who is strapped into a straitjacket, and it would be bad, except for one thing. He is strapped with his arms crossed, not folded, which makes a big difference. With folded arms, the sleeves would be interlaced, preventing the arms from moving independently. But when the right arm is crossed over the left, the right arm can be worked upward and over the head as in Figs. 12 and 13. Both arms are then brought in front of the body (Fig. 14), so the hands can work at the straps through the cloth, finally completing the release as in Fig. 15.

Not as Easy as It Sounds. There is a lot more to it, depending on the type of jacket used. Some so-called straitjackets are so flimsy, both as to material and straps, that the escape loses most of its effect. So it is a good plan to make sure that the jacket looks the part. Special jackets can be bought from magic dealers, and some of these are cleverly faked so that they will stand inspection, yet allow a quick escape. Those will do as part of a regular act, but if a performer expects challenges, he will have to practice with regulation jackets.

Some of those regulation jackets are very formidable, and others are so heavily reinforced with leather, extra straps, and other devices, that they present problems even to the most experienced escape artist. So when planning an escape from a straitjacket, it is best to study that type of work, and look over available jackets before rushing headlong into one.

Escape from a Packing Box



THIS is one of the few Houdini escapes that is fairly simple to produce—most of them are extremely complicated. There are many versions of the packing box escape, but this is one of the most practical. The box can be sturdily built and used over and over again, unlike many such boxes. It can also serve as a carrying case for other equipment.

The Box Itself should be 36 x 36 x 38 in., which allows ample space for the performer; although the dimensions may be altered to suit the individual. It is constructed from ¾-in. lumber throughout, each side having boards 9½ in. wide (nominal 1 x 10), which are placed horizontally. The top and bottom also use this same size lumber, but one top board and one bottom will have to have 2 in. of width ripped off to conform to the 36-in. dimension. The side boards are solidly screwed or nailed from the outside to interior corner posts (Fig. 2), consisting of two ¾ x 2⅝ x 33-in. boards (nominal 1 x 3).

Adding to the sturdy construction are (1 x 3) cleats 2⅝ in. wide and 34½ in. long for sides, 36 in. long for front and back. These run around the inside of the case at the top, above the posts, and act as a reinforcement to the rim, giving it a 1½-in. thickness. The top of the box has two interior cross braces (1 x 3); and the bottom has two such braces on the outside, elevating the box ¾ in. and strengthening it as well (Fig. 1).

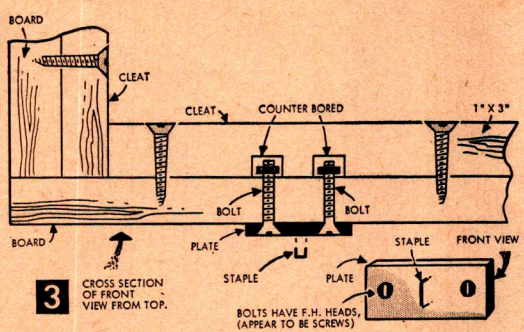
The box has hasps and staples at the front, so that it can be locked with a pair of padlocks. The hasps and staples are fixed by screws from the outside as are hinges at the back of the box. The cleats and top cross braces add sufficient thickness for the insertion of heavy screws to hold the staples, hasps, and hinges solidly in place.

The cleats and top braces are screwed to the sides and top, respectively; the bottom braces are also screwed on.

Air holes are bored in top, sides, and bottom, but none are large enough to enable the imprisoned performer to get at the padlocks.

They merely provide him with air, so that he can keep on trying to escape, no matter how long it may take.

It Does Not Take Long, usually. Despite thorough inspection by a committee, and the fact that the box can be roped and tied as well as locked, the escape artist should be out within five minutes. The escape takes place inside a curtained cabinet, but the box is still locked at the finish and can be examined



after the trick as well as before, making it all the more wonderful.

The secret depends upon several hidden factors. First, the "screws" that hold the staples on the front of the box, just below the lid. These are tightly fixed, and will stand close inspection. As they are on the outside

MATERIALS LIST—PACKING BOX ESCAPE

No. Req.	Size and Description
6	¾ x 9½" x 12' boards (nominal 1 x 10 for front, back, sides, top, bottom)
1	¾ x 9½" x 7' board (nominal 1 x 10 for bottom)
4	¾ x 2⅝" x 12' boards (nominal 1 x 3 for braces, cleats, corner posts)
2	hasps with corresponding staples
2	hinges
2	padlocks with duplicate keys
4	1" bolts (to appear as screws in staple plate)
	1" screws (for hasps and hinges)
	1½ screws (3 for each cleat, at least 4 and preferably 8 for each cross brace)
	6d and 8d nails

of the box, the performer cannot get at them.

However, while they look like wood screws, they are really bolts, held by nuts on the inside of the board (Fig. 3). Holes are counterbored in the cleat behind the board, to allow for these hidden nuts. The cleat itself is screwed firmly to the board, but since the screws are on the inside, the performer can remove them with a small screwdriver that he takes with him into the box.

Once the cleat is off, the performer unscrews the bolts, and pushes them out through the holes with the screwdriver. This enables him to lift the locked top, the staples going up with it. He emerges from the box, unlocks the padlocks with duplicate keys, replaces bolts, nuts, and cleat, and locks the box again.

If the Box Is Roped, there is a neat way of handling that, too. Among the air holes drilled in the box, there is a large one at the bottom, midway between the two cross braces on which the box stands. The braces allow space for sliding a rope underneath. An assistant takes care of this, and in drawing the rope under the box he moves it to the handle as well.

The performer pushes a short buttonhook down through the air hole with which he catches the rope and hauls a loop up into the box. While the assistant is bringing the end of the rope up in back of the box, the performer hauls in still more. The box can then be thoroughly roped and tied, but the performer can raise the lid by releasing the slack.

After the escape, he pulls the rope tight and cuts off the slack with a knife, close to the knot. He ties the loose end into the knot so that the rope looks just as it did before the escape. It is a good plan to take the knife into the box at the start, in case there is trouble with the slack. The performer can then cut the rope by working the knife out beneath the box lid.

Small pliers will also be needed in case the staple bolts are tight, and you might find it advantageous to have a tiny flashlight with you. All such items should be as compact as possible, so that they can be easily concealed in the performer's clothing.

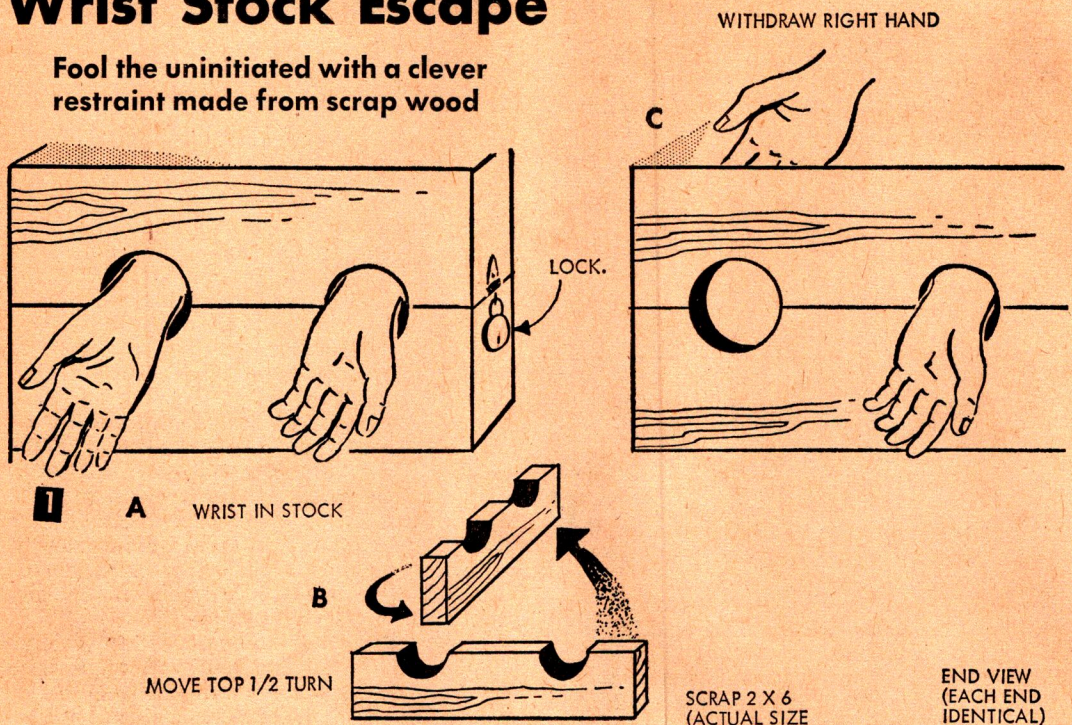
Cord Through Wrist

• This trick can be performed with or without something up your sleeve. Have someone tie the ends of a cord firmly around your wrists, and have him hand you a ring of cord, also securely tied. After turning your back for an instant, you turn around again, with the ring on the cord between your hands.

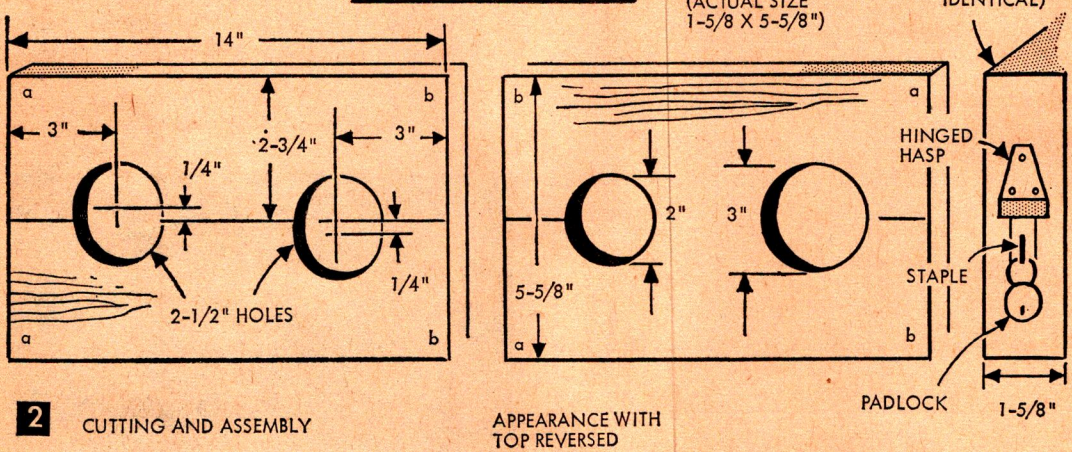
While your back is turned, pass the ring over one hand and up under the cord around your wrist; then pass the outer side of the ring down over your hand again, outside of the cord. A quicker way is to conceal a duplicate ring up your sleeve; you can hide the other one in the top of your pants.

Wrist Stock Escape

Fool the uninitiated with a clever restraint made from scrap wood



1



2 CUTTING AND ASSEMBLY

APPEARANCE WITH TOP REVERSED

FRIENDS will really be fooled by this one the first time around, but sharp-eyed persons may spot the secret after a few performances. Construction is simple; however, there's more to it than the obvious boring of two holes and a saw cut.

The stock consists of top and bottom sections with half holes for each wrist and padlocks at each end to lock them tightly together. After locking it around the wrists of a volunteer, the magician invites him to escape from "these formidable stocks." When he gives up, he is freed and the magician allows his own wrists to be locked in exactly the same fashion. He steps behind or into a cabinet and returns a minute or so later with his hands free, but with the stocks still locked.

Special attention is called to the fact that the performer cannot reach the padlocks with his hands while they are in the stocks which makes it impossible for him to unlock them.

Actually, you can open the padlocks with a duplicate key, but only after you have freed your right hand. You manage this thanks to a special feature of the stock which the new observer will not notice.

Various Cut Ends of Wood in your scrap box will serve to make up the stock which

can be as short as 12 in. and stand 5½ in. or more high. Even 1-in. stock will do, though the trick will be much more effective if you use a piece of 2 x 6 or 2 x 8 stock, or even two lengths of 2 x 4.

Fig. 2 shows how to build the device from 2 x 6 stock which is actually 1⅝ x ⅝ in. Since the top half of the stock must be reversed during the performance, it is especially important to make all measures and cuts accurately. If not, the holes and locks may not line up properly.

First scribe a line for a ripsaw cut 2¾ in. from the top. Before sawing the wood, locate the two wrist hole centers. Mark one center ¼ in. above the saw line and the other ¼ in. below, making sure that each is exactly the same distance from its nearest edge. Cut out the holes with a circle cutter or hole cutter, then rip the wood at the scribed line. If you cannot conveniently cut the holes in this manner, rip the wood first, then cut out the half circles in each piece with a coping saw.

Align the pieces and install identical hinged hasps on each end as in Fig. 2 so that when closed, they will clamp the upper and lower portions of the stock together. Install each part of the hasp so that it is centered between side edges of the stock. Now check your work by turning the top portion half way around so that the half holes join with the opposite halves. Success of the trick depends on the cutouts matching and the hasps joining perfectly, with top in either normal or reverse position. Equip the hasps with identical padlocks and put spare keys in your pocket.

In normal position—and this is the only way your audience will see the stock—the holes are of the same diameter, if slightly off level. They fit snugly but not too tightly around the wrists of the spectator who "tries on" these cumbersome brackets (Fig. 1).

Switching the Top Section. When you release him, unlock both locks, then lift off the top piece entirely and casually give it a half turn as you set it down. If you do not make a show of this particular action, your audience will not notice this move. Place your own hands in the holes with top part now in reversed position and invite your volunteer to close the hasps and lock you in. Since your wrists fill the holes, the audience will not be able to see that one hole is smaller and the other larger than originally (Fig. 2A). This tightens the stock around one wrist, but enlarges the space around the other so that you will have just enough leeway to pull your hand free.

MATERIALS LIST—WRIST STOCK ESCAPE

No. Req.	Size and Description
1 pc.	1⅝ x 5⅝ x 14" wood (stock)
2	hinged hasps (stock end clamps)
2	padlocks (locks for hasps)
Misc.	shellac or finish to suit

As soon as you are out of sight, quickly release the hand, take a pair of duplicate keys from your pocket, unlock the stocks, put the keys away, release your other hand, turn the upper section back to normal and put the padlocks back in place.

Step out smiling with the locked stock in your hand and offer it to the baffled spectators for final examination.

You can prearrange to free either your right or left hand merely by the position of the stock at the start. It should appear the same from back or front.

Matches Meet Their Match

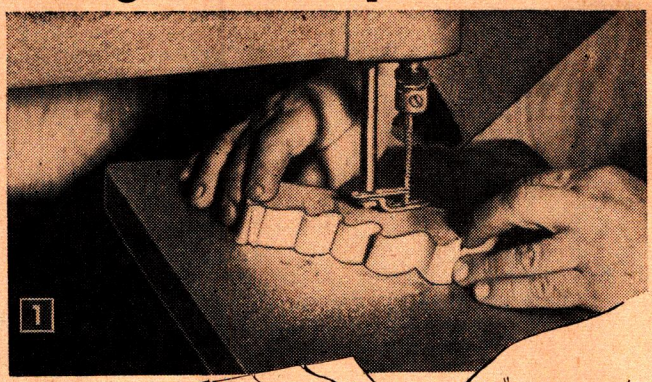
• These matches seem to pass through each other as you bring them together in your hands. Hold one wooden match in each hand, between the tips of the thumb and forefinger, one in a vertical and the other in a horizontal position, and bring your hands together. The matches seem to pass through each other, and you show them interlocked.

Dexterity plus a little sleight-of-hand are the secret. Let the top of the vertical match slip from the tip of the forefinger to between it and the middle finger, where it can be gripped unnoticed. Thus held, the match can be quickly lifted and lowered again to provide secret passage for the horizontal match.

3-Dimensional Jigsaw Perplexture

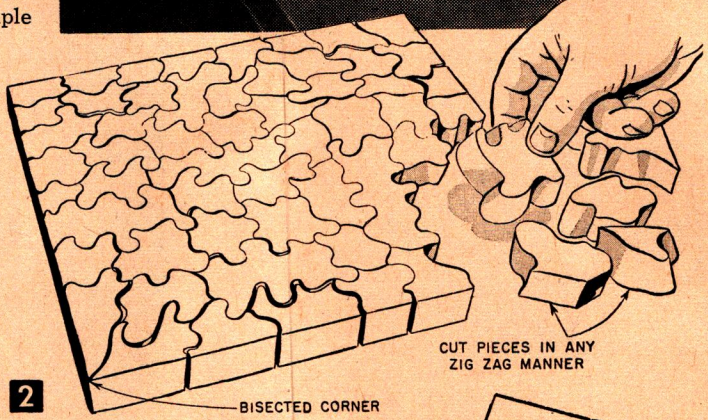
By JOHN MATRICK

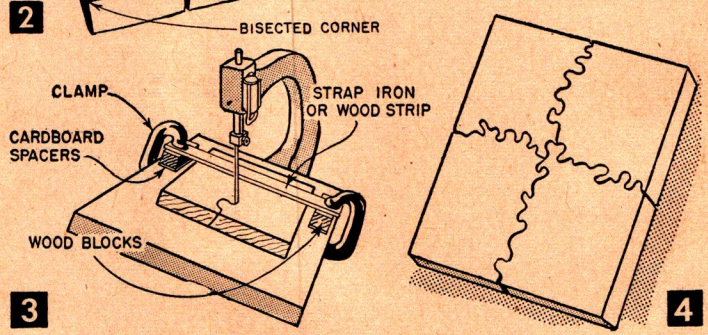
Photo by Kunkle



DO YOU think chess is a hard game? Just try solving the 3-dimensional jigsaw puzzle shown here. In ordinary jigsaws, the puzzle piece either drops right into place or belongs somewhere else. But here the piece must fit not only on the surface but on all sides and the bottom as well. Furthermore, there is no picture pattern to act as guide—only a plain-grained piece of maple or birch 1 in. thick x 12 in. square. Although you can make it any size you want, a 12 in. sq. board provides plenty of pieces and plenty of trouble.

Sand the board thoroughly on sides and edges before sawing. If your jig saw is not equipped with a hold-down foot, place a piece of strap iron or wood strip across plate, back of saw blade (Fig. 3). Clamp it on two wooden blocks with cardboard spacers to adjust height of opening. Set your saw table at 15° and saw board in half, using any irregular cuts that come into your head. Try to saw in a few "locks" to help hold the pieces together while assembling (Fig. 4). Then saw the two pieces in half, turning the board every which way. Do not saw curves too closely, or the cuts will intersect and spoil bottom pattern. A few practice cuts on a piece of scrap will help a lot in figuring how close a curve you can handle. Note that each time a curve is made the angle changes, relative to that of the preceding cuts.





Use a fine-tooth blade to minimize ragged edges on bottom pieces, and sand these edges later in any case. If plywood is used, a skip tooth blade (available at any dealer's) works best.

Lay a piece of cardboard or thin plywood on a table near the saw. Place the four sections in their original positions relative to each other. Saw each of the quarter pieces in zigzag strips about 1½ in. wide, including turns and locks, again replacing in original position on cardboard. Start sawing each strip crosswise in turn, to provide the individual pieces. The simpler the lines, the simpler the solution to the puzzle, of course. But, for a real puzzler, you might even want to saw corners right to the point so that a right-angle piece cannot give away the fact that it is a corner member (Fig. 2). Replace each piece as it is cut into the original pattern, for it may be the last time you will see the pattern complete!

Finally, give each piece a coat of shellac, thinned one-half with cutting alcohol, then lightly sand and follow with one more coat full strength. Sand again, and polish surfaces with paste wax, if desired, using buffing wheel on the lathe.

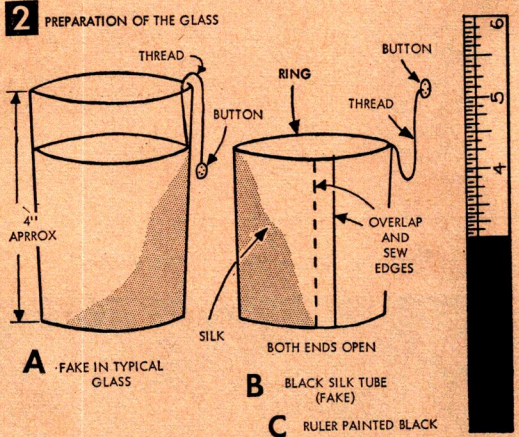
Put all the pieces into a bag or small box, and label it. Make several puzzles, one for each member of the family, to be traded back and forth when solved. But be sure to keep the pieces of the various puzzles strictly by themselves—this thing is tough enough without losing a piece or adding foreign ones!

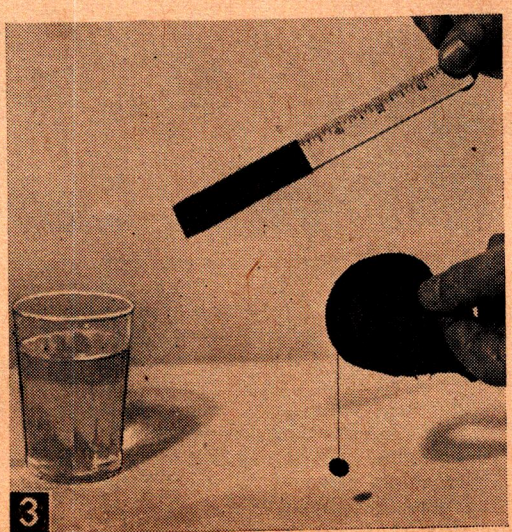
A Quick Transformation

Ink Into Water

To test the "ink," ruler is pushed down into glass with plain back side in view and then turned around. When withdrawn, the audience sees it stained an inky black.

IN THIS surprising trick, the magician shows a glass filled with black ink. He even measures its depth (Fig. 1) by dipping a ruler into the glass and bringing it out stained with ink to the 3-in. mark. He places a handkerchief over the glass, then whips the cloth away. The ink has instantly turned to water!





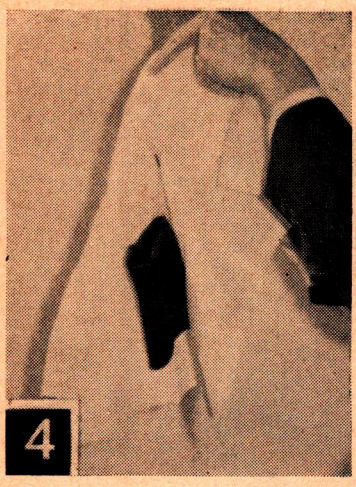
You can perform this mystifying transformation easily if you know the secret: a tube of black silk cut and sewn neatly to fit inside an ordinary water glass as in Fig. 2. The few materials needed are commonly found in most households.

Making the Tube. Select a ring of plastic or some other firm material that will just fit inside the glass at a point ½ to 1 in. below the top. The glass, of course, should be the type which tapers slightly from the brim to a narrower base. If you cannot locate the proper size ring, you can cut a piece of wire from a coat hanger and form one.

Obtain a piece of black silk about 4 x 8 in. in size, or just enough to wrap around the ring and cover the inside of the glass. One of your old ties might supply the needed silk or perhaps one of the ladies in your home can cut it for you from discarded clothing. Otherwise buy a small, cheap scarf at the local dime store. Sew the top of the silk tube around the ring and sew the overlapped side edges together as in Fig. 2B.

Attach a fine black thread to the ring, making sure that it is long enough to come up over the edge of the glass and down at least a third of the way on the outside (Figs. 2 and 3). Tie a small black button on the outside end.

Materials prepared for the trick include small ruler painted gloss black on marked side to resemble ink and black silk tube. Heavier thread is shown here and in Fig. 1 for purposes of illustration.



Rear view exposing the trick. Button is held through cloth, thus lifting silk tube within folds of the handkerchief, and leaving only plain water to confound the audience.

MATERIALS LIST—INK INTO WATER

No. Req.	Size and Description
1	tapered water glass
1	ring to fit glass (see text)
1 pc.	4 x 8" black silk (glass tube lining)
1	dark handkerchief (glass cover)
Misc	fine black thread, black button, water

Paint a 6-in. Ruler gloss black on the printed side only and up to the proper inch mark as in Figs. 2C and 3 (height of your silk tube). Now fill the glass with water to this level and install the tube in place. If necessary, use a spoon to push the silk against the inside of the glass so that it adheres there. Place the ruler on the table, plain side up, so that it will be natural to pick it up at the 6-in. end. Have a dark handkerchief handy and you're all set for your audience.

Bring out your table or tray, keeping the button side away from view. Lift the glass, keeping your fingers over the button. From a short distance, you can show this on all sides as a glass of ink, and it will look the part.

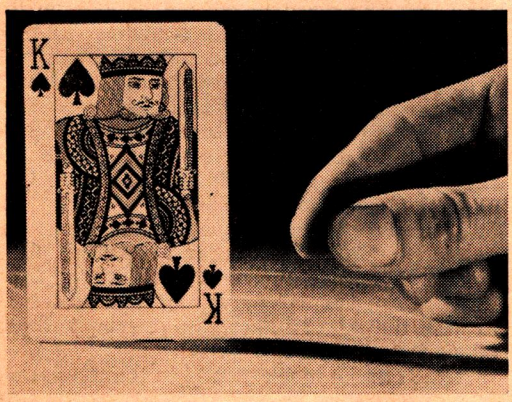
Lift the ruler, showing the plain side as in Fig. 1. Dip it into the glass, turning it as you do. Since most rulers are marked only on one side, your audience will think you are turning it only to show them the ruled side. When you take out the ruler, water will be dripping from it, but the black paint will make people think it is ink.

Now, cover the glass with the dark handkerchief, grasp the button through the cloth and whip the handkerchief away, carrying the silk tube in its folds (Fig. 4). Toss the handkerchief aside and walk forward with the glass of water for inspection.

For a Platform Presentation, you can use a large straight-walled jar or bowl, if you modify the silk fake to the required size, and create a spectacular finish by placing one or more small goldfish in the bowl beforehand.

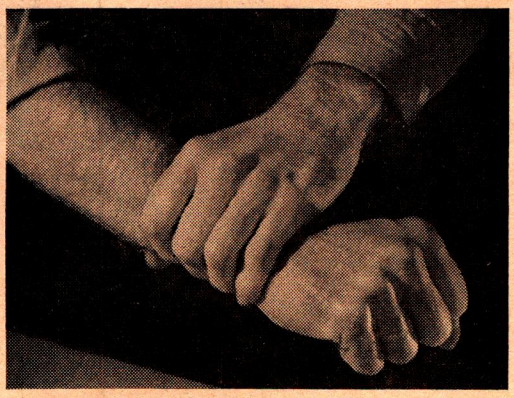
When you pull this fake away, using a larger cloth cover, the sudden appearance of the fish not only startles the onlookers but is quite convincing that the ink has really become water. Otherwise, it would seem the fish could not survive.

Card Stands on End



• After your friends have failed to accomplish this trick, set the card on end, making elaborate balancing adjustments. But you must be fast enough with your fingers to palm the gimmick that acts as a support when returning the card to your audience for one more try. The support is a thin strip cut from a tin can and bent to the shape of an "L". The bottom part is about ½ in. long and the vertical, which should lean back slightly, is 1 in. long.

Where Does the Money Go?



• In this trick coins disappear without going up your sleeve. To prove it, roll up your right sleeve and have a friend grip your right wrist. Show him how by gripping it yourself, as shown, and shake your arm to jingle the coins. Then, when your friend takes hold, open your right palm—the coins will have vanished. They were in your left hand all the time. If you find it hard to hold the coins when releasing the wrist, try gripping it from beneath, instead.

21 Table-Top TRICKS

Pop!—goes the pencil.

Try these mystifying tricks on your friends at home

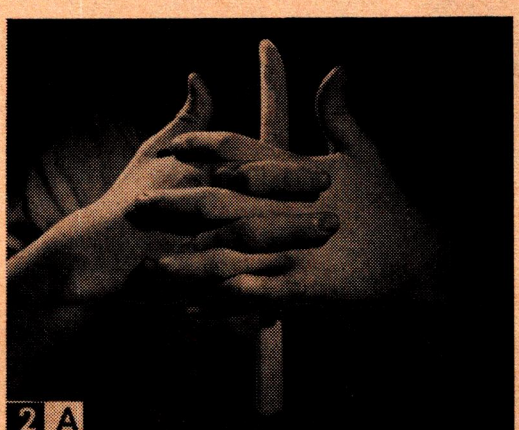
THE hand that's quicker than the eye can be yours in an intriguing hour of planned magic. After very little practice, you'll be able to perform the following teasers with complete confidence. And they'll baffle your friends until you finally reveal how easily you fooled them.

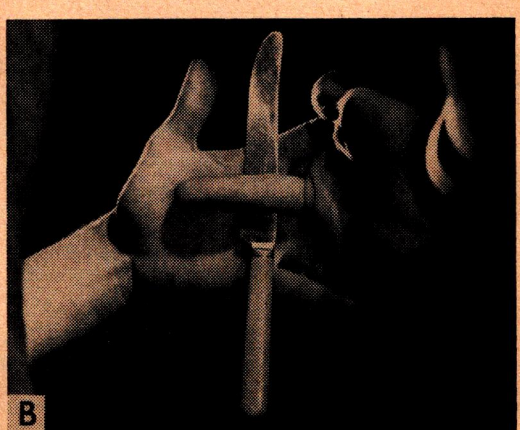
Pop!—Goes the Pencil. Next time someone asks for a pencil, give him a surprise as well. Offer the pencil in your clenched fist. As he reaches for it, somewhat puzzled by your unusual manner, the pencil jumps out to meet him! (Fig. 1).

A rubber band acts as the secret propellant. Loop it around your second finger where it won't show when you hold up your fist. Push back end of pencil against other end of the rubber loop extending into your palm. Release your grip very slightly and the pencil will leap out. A few rehearsals will perfect your timing and determine best tension—and be careful where you point that pencil!

Magnetic Personality? At the table before dinner, hold a table knife between the palms of your clasped hands. Now raise your hands with backs toward your spectators, and slowly separate the palms until the two hands are in a straight line as in Fig. 2A. When you proclaim the knife is held in place by magnetism, you'll be challenged. So raise up one thumb and then the other. Then really confound the doubters and show both together.

What invisible power supports the knife? Instead of folding your hands as usual, slide together as in Fig. 2B, with the second finger of the right hand remaining in the palm, where it holds the knife. While only seven fingers are visible the arrangement looks so natural that another won't be missed.





Magnetic personality? Oops—how did that finger get in there?

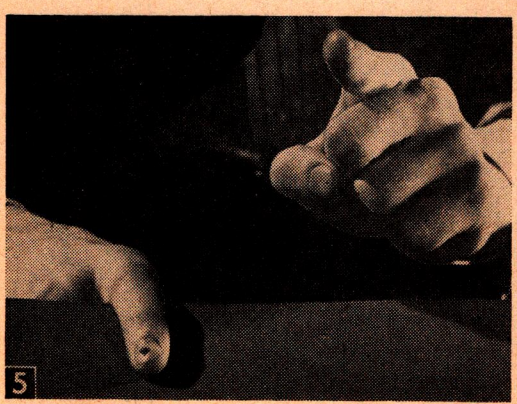
What makes it float?

What Makes It Float? Everyone knows that sugar does not float on coffee, so surprise your friends when the coffee comes around by making a lump appear to do so (Fig. 3).

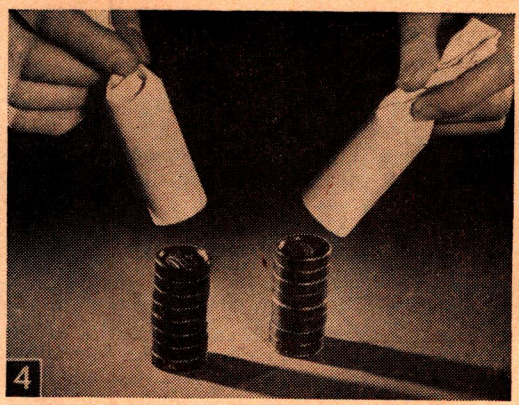
After making sure the coffee is not too deep, quietly stand a lump of sugar on end on the bottom of your cup. Balance a second lump on the first and call attention to the floating sugar. By watching closely, you can tell when the support is about to collapse and command the "floating" lump to sink.

Quick-Change Checkers. After the table is cleared, make two piles of checkers, one red and the other black. Wrap a piece of white paper around each pile while on the table. Twist top of each paper to hold wrappings in place and form handles as in Fig. 4. Now place the piles some distance apart on the table and shuffle them around a few times. Occasionally lift the piles in their wrappers to show the bottoms to your audience. Finally, ask someone to tell you which pile is black or red. Remove paper—the answer will likely be wrong.

The piles only appeared to have switched places, because trick checkers were placed for the bottom of each pile. The undersides are painted the opposite color.



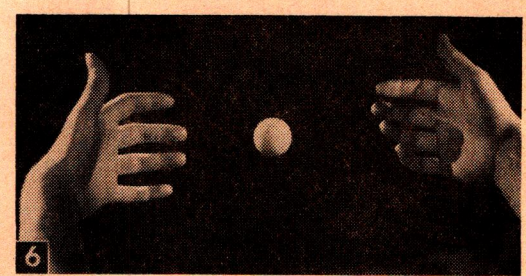
Now you see it; now you don't.



Quick-change checkers.

Now You See It; Now You Don't. Draw a small black dot with pencil or ink on the nail of each forefinger as in Fig. 5. Rest both forefingers on the edge of the table. Now lift your right hand and command the spot to vanish. Lower it to original position and the spot has gone! Do the same with the left hand. Then make both spots return.

This is easy if you can manipulate your fingers faster than the eye can follow. Keep all fingers closed except those exhibited. To make a spot vanish, raise your hand and, just as it is being lowered, secretly double back the forefinger and extend the second finger in its place. As the rest of the hand is below the table line when the finger rests on the table, the ruse is hard to discover.

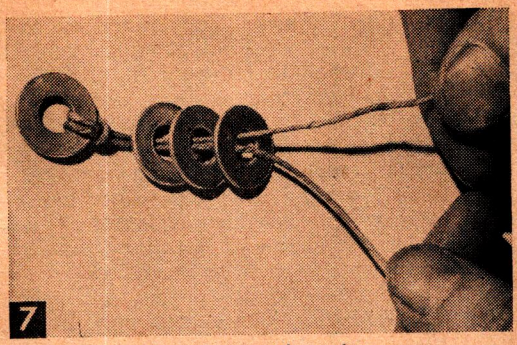


Ball space rider.

Ball Space Rider. Make a Ping-pong ball travel mysteriously between your hands (Fig. 6).

The secret is a loop of thin black thread stretched between your thumbs or over a finger of each hand. Keeping the loop taut forms a double track to support the ball. Slight tilting will cause ball to move. The thread can't be seen against a dark background.

No Strings on These Rings. Loop a washer or other ring on the middle of a length of cord, then place three more rings over the doubled cord as in Fig. 7. Ask someone to hold the free ends.



No strings on these rings.

Now pretend to cut the end of the loop with your right hand as you conceal rings with your left. But instead, slip end of loop down over the end ring which frees it and allows the others to slip off. To the consternation of the volunteer holding the ends, the cut cord is whole again!

Diving Eye Dropper. Here's a streamlined version of a scientific toy that has amazed grown-ups and children alike for centuries. Fill a soda bottle with water. Put just enough water in an eye dropper so that it barely floats in the bottle as in Fig. 8. By adjusting the cork, the dropper can be sent to the bottom and allowed to surface at will.

Pressing the cork "squeezes" the water. This compresses the air in the top of the dropper, making the dropper less buoyant.

"Thin Air" Force can be demonstrated with the help of an ordinary flat rubber sink stopper. Tie a cord to the stopper ring and press stopper firmly on the top center of a stool, after wetting this surface with a little water to keep air from creeping under the stopper.

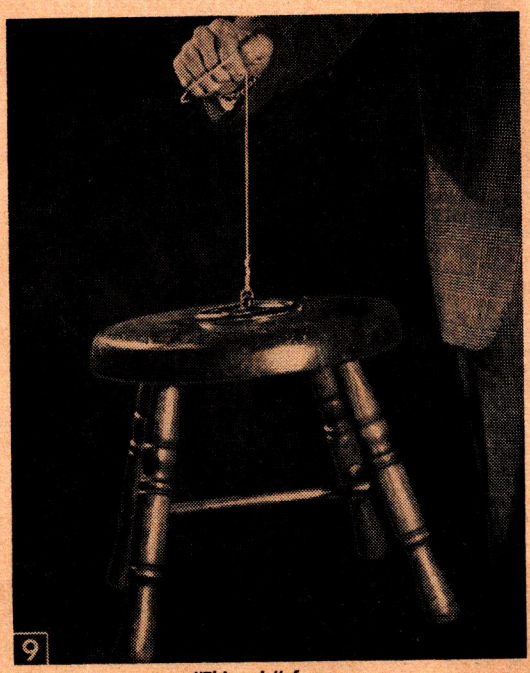
Diving eye dropper.

Lift straight up on the cord, as in Fig. 9, and the heavy stool will rise with the stopper. Air pressure above stopper and below stool press the two together.

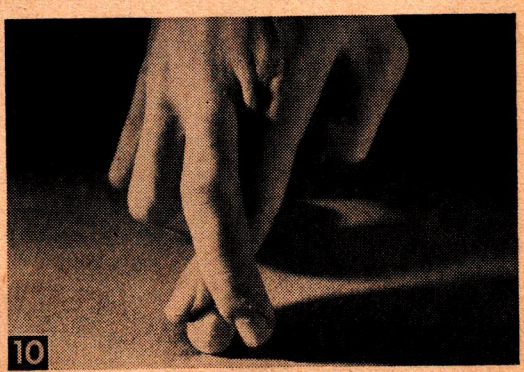
One or Two Balls? If anyone still thinks he can trust his senses, try this. Have him try rolling a large marble or Ping-pong ball between the tips of his first and second fingers, crossed as shown in Fig. 10—and with eyes closed.

His mind will remind him there's only one ball, but his senses will try desperately to convince him that there are two. By crossing the fingers, sense stimuli come to the brain by unfamiliar paths and the mind is thereby confused.

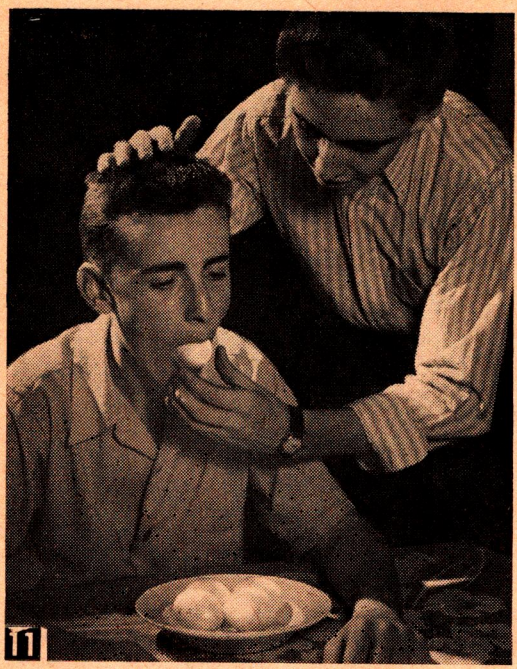
Try this yourself. It works the same on the magician as on his puzzled subjects.



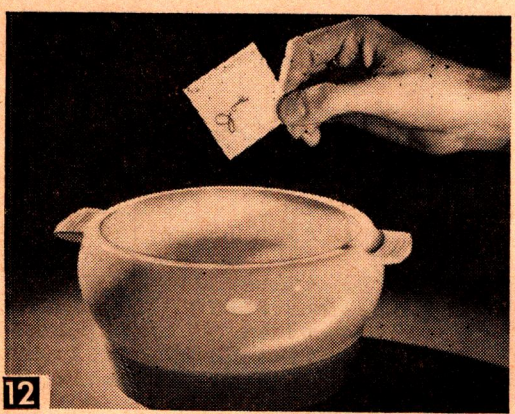
"Thin air" force.



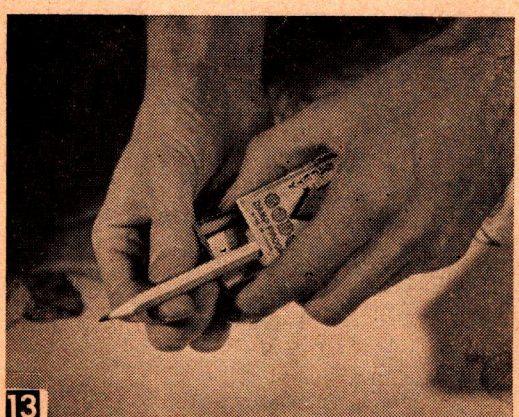
One or two balls?



How do you like your eggs?



The magic touch.



A folding pencil?

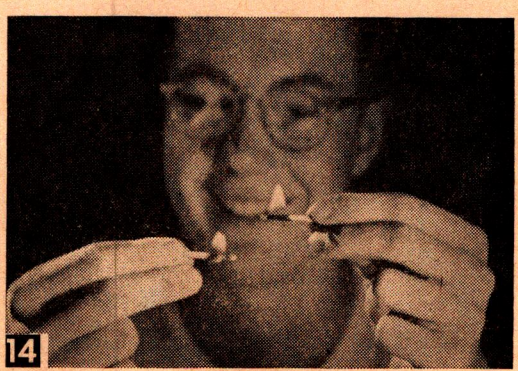
Human Egg Factory. You'll need an assistant for this one. Seat him at the table and place an empty plate before him. Pat his head, and an egg emerges from his mouth (Fig. 11). Remove the egg with your free hand and place it in the dish. Then pass behind your assistant, go to his other side, and pat him on the head with your other hand; once more an egg emerges and is put in the dish. Repeat this back-and-forth process until four or five eggs have been produced.

Is your "goose" really giving with the magic eggs? Hardly! One egg (a small hard-boiled one is easiest to handle) is already in the assistant's mouth; another is in your palm. As the hand with the palmed egg approaches the mouth, the egg inside is forced out until it is visible. You pretend to grasp it, but it is withdrawn into the mouth and the palmed egg is put in the dish. As you pass behind your assistant, you palm another egg held in a little pocket behind the chair or in his waistband. The last egg produced is, of course, the one held in the assistant's mouth.

Seeing with Your Hands. Fold a piece of paper so as to form nine equal squares, and have someone write a name in the center square. Then tear the paper along the folds, drop the pieces into a deep dish, and scramble them. Blindfolded, you pick out the square on which the name is written (Fig. 12). How? By feeling the edges of each square—the center one is the only one with four rough edges.

Pencil-in-the-Box. Performed nonchalantly, this trick will not fail to surprise. Take a small matchbox from your pocket and open the drawer. Looking inside, you appear astonished, then reach into the box and pull out a full-length pencil (Fig. 13). The pencil, point downward, is concealed up your left sleeve, and the rear end of the matchbox has been removed. When the drawer is opened, the pencil is pushed far enough into it to be grasped.

Flaming Fission. Light an ordinary paper match and pretend you are going to transfer it from one hand to the other. To everyone's



Flaming fission!

surprise, as your hands finish the rapid motion of the transfer, *each* hand now holds a lighted match—the single match has become two (Fig. 14). To accomplish this neat little trick, first secretly split the match from its lower end to the base of the head. Strike as a single match. After it has been lit for a moment, the head will readily separate.

Name the Color. Even if you haven't eyes in the back of your head, you can make your friends think so by means of this little feat. Put your hands behind your back and have someone hand you a crayon. Immediately whip forward your free hand (Fig. 15), point to the person who gave you the crayon, and tell him the color. It's all very easy if you are careful to make a little streak with the crayon on the inside of the hand you point with—a streak you can see as you point.

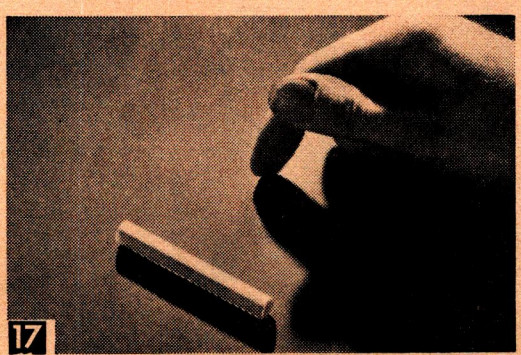
The Six Pile. With this card trick you can't lose, but try it only once in an evening. Write a note and fold it. Then deal out two piles of cards, face down. Announce that this takes concentration and, after a moment's silence, ask someone to choose a pile. When he has indicated his choice, let him read the note (Fig. 16). It says, "You will pick the six pile." So he has—in one pile there are six cards and in the other the four sixes, which you had secretly placed on top of the deck.

If you wish to make this one a little less obvious, make cards 2, 4, 6, and 8 from the top of the deck the sixes; then deal to each pile alternately, with the last two cards you deal going to the pile you began with. Note: After the choice is made, don't let any member of your audience get hold of the remaining pile, or the illusion will be spoiled.

Magnetic Paper. Briskly rub a finger on your coat sleeve, and a little paper cylinder follows it obediently (Fig. 17). Could static electricity be the 'cause? Your scientific friends will say that is impossible: in fact, they can't make the trick work at all! The rubbing, of course, is only a gag. You cause the cylinder to roll by blowing gently and secretly on the table, directly behind it.

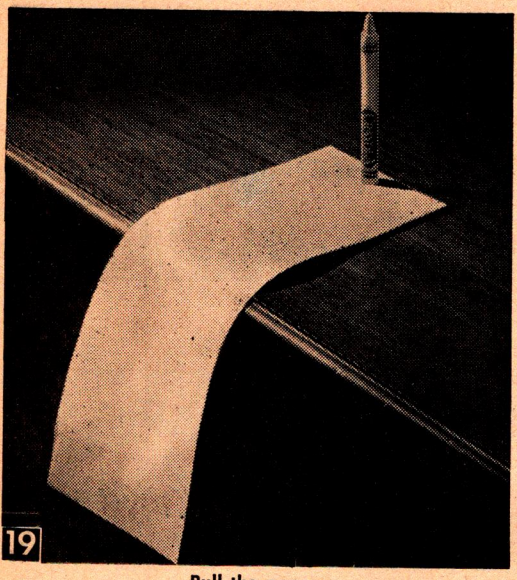
15 It's blue!

16 It's all in the mind.



17 Follow my finger.

A spirit message?



Pull the paper.

Drink up.

Juice Writing. Use this one only on the strictly uninitiated. By thoroughly heating a piece of blank paper with a match or cigarette lighter (moving the paper rapidly enough so that it doesn't catch fire), you can make writing *mysteriously appear* (Fig. 18). Although you don't tell your unsuspecting audience, of course, the writing was done previously by means of a match or toothpick dipped in lemon or grapefruit juice. Ordinarily invisible, it becomes brown when heated. Maybe you can think of something more original to say than "Hello."

Pull the Paper. While not exactly in the realm of magic, this trick will be very difficult for your friends to perform, not so hard for you—once you get the hang of it. It is easy to jerk a strip of paper from under a glass of water without upsetting it; to remove it from under a crayon stood on end, however (Fig. 19), is a different matter. No ordinary pull is quick enough to keep it from toppling. After a few members of your audience have tried (and failed, you hope), hold the end of the strip in one hand and bring down upon the held-out paper a quick blow from two extended fingers of the other hand, from a full arm swing. The paper should be rather limp.

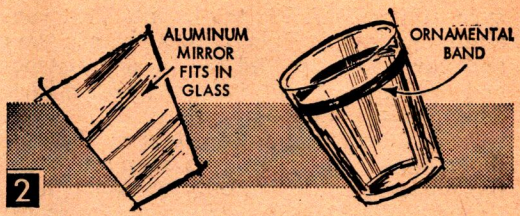
Drink Up. Invert an empty glass and stand it, rim against rim, on top of a glass full of water (Fig. 20). Now challenge a guest to drink the water without touching either glass with his hands or arms. After he gives up, show him how. Remove the upper glass by grasping it between your chin and chest. Then move the full glass to the edge of the table with your teeth. Still guiding it with your teeth, you can now tilt it and drink the water.

Balanced Water. Can you balance a glass of water on the edge of a playing card, as shown in Fig. 21? You can if you place the glass so that the middle of its bottom is behind the card and the tip of the missing finger is held under the rear edge as a prop.

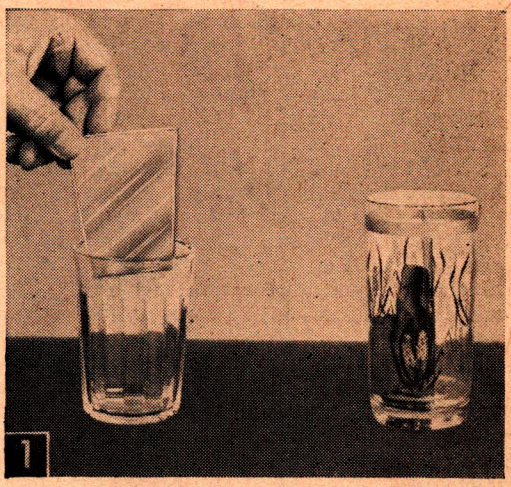
By the force of will . . .

How to prepare and present—

The Flying Handkerchief



★ **How does the missing red silk manage to turn up in a glass tumbler, firmly tied between two greens?**



Two types of glasses suitable for the trick: fluted or decorative. Sheet aluminum cut to fit glass serves as mirror. Side view of glass at right shows how bundle of silks is hidden behind partition.

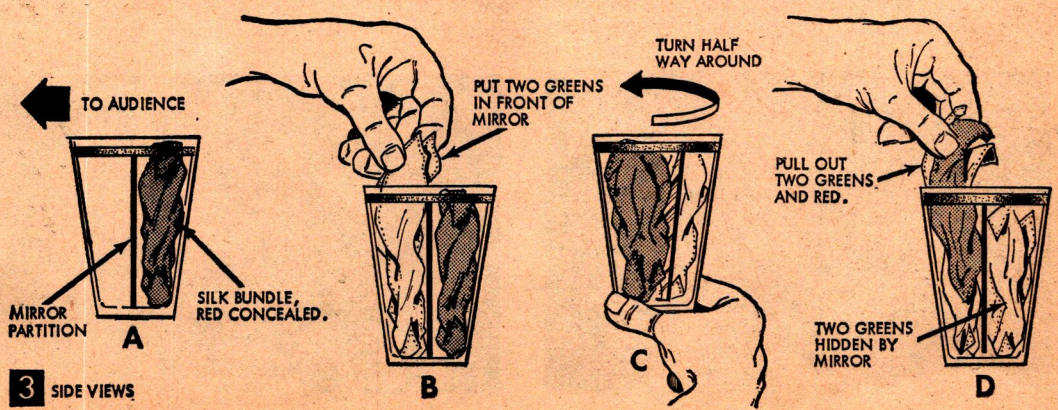
THIS is a sure-fire favorite among silk tricks. Three silk handkerchiefs are used: a red one, which is shown and laid aside, and two green ones, which are tied together at the corners, rolled into a ball, and inserted into a tall drinking glass.

The magician then picks up the red silk, and pushes it into a paper cone, or some other contrivance from which it vanishes. That is surprising enough, but what follows is really magical. The green silks are pulled from the glass and spread by opposite corners. There, knotted between them, is the missing red silk!

A Special Glass Is Needed, of the type known as a "mirror glass." The glass itself is common, but only certain styles are suitable (Fig. 1). You can use a fluted glass because its sides refract light; also, any glass with a light design and a band near the top. Plastic glasses of the fluted style illustrated are satisfactory.

The "special" part is a metal divider, or partition (Figs. 1 and 2A), cut to fit snugly across the center of the glass. You may use a two-sided chrome-plated mirror, but a piece of shiny aluminum cut to size will be practical and far more economical. Small pieces of a suitably reflective aluminum sheet can be obtained in many hardware and variety stores.

Naturally, the aluminum doesn't reflect as well as chrome, but this is an advantage. If a mirror is turned squarely toward an audi-



ence, full reflection is too bright. Test your aluminum "mirror" alongside an empty glass, and you will soon find the proper distance and lighting that will make the mirror glass deceptive, appear totally empty.

Cut a Cardboard Pattern first to fit across the glass carefully, so that you can shape the mirror partition exactly the same for a tight fit. This is necessary for two reasons: 1) you don't want anything to show around the glass edges; 2) the mirror should not rattle. It should be snug, yet removable.

In addition to the mirror glass, you will need two sets of silk handkerchiefs, each consisting of one red and two greens. Set "A" is the group that the audience sees at the start of the trick. Set "B" is arranged beforehand by knotting a red silk between two greens. Roll red silk into a bundle, and bunch the two greens about it, so that none of the red shows. Then stuff the bundle down behind the mirror, until completely hidden, but with ends of both green silks projecting upward as in Figs. 1 and 3A.

How to Perform. Place the previously prepared glass on the table, with shiny mirror toward the front so that it looks like any ordinary glass. Working with Set "A," tie the two greens together, bundle and push them down into the front half of the glass (Fig. 3C).

MATERIALS LIST—FLYING HANDKERCHIEF

No. Req.	Size and Description
1	8 oz. water tumbler with fluted sides or a light design
1 pc.	4 x 6" thin-gage bright aluminum sheet (cut for glass partition)
6	12 x 12" silk handkerchiefs arranged in two matching sets of two greens and one red each
1	small piece scrap cardboard (glass partition pattern)

Then pick up the glass, show it freely, and transfer it to the other hand, turning it around before replacing it on the table.

The part previously behind mirror partition should now be in front as in Fig. 3C. Since there are green silks bundled in both sides, the glass looks the same from all angles which is the beauty of the trick. Just prior to this trick and for special effect, try vanishing a red silk either from the paper cone, or by some other method described in MAGIC HANDBOOK.

Now draw the bundle of green silks from what has just become the front half of the mirror glass (Fig. 3D). Since ends of both silks are pointed upward, take one in each hand, and whip the green silks apart as you step forward, showing the red silk tied between them.

Be careful not to lift the glass when drawing out the bundle. Hold it with the left hand, and keep one finger pressed down on the mirror partition, while the right hand pulls out the packet of silks. In this way, there is no chance for the mirror to come out with them. Don't spread the bundle until you have stepped forward. By then, you will be in front of the glass, and it will be forgotten by the audience.

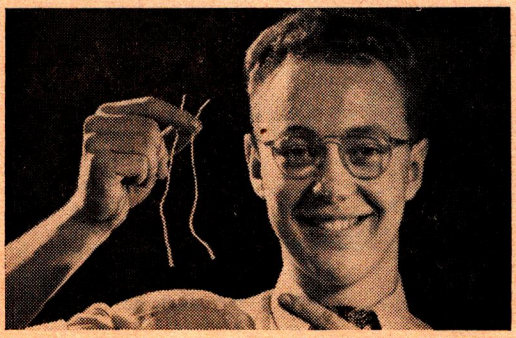
As soon as the trick is over, turn around, stuff the knotted silks loosely into the front half of the mirror glass and let them flow all over it. Then you can lay the whole thing aside.

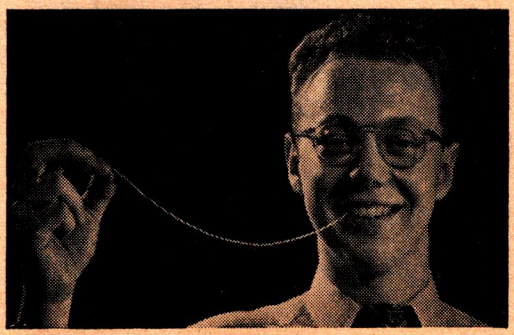
Large, fluted glasses with specially chromed mirrors are sold by many magic supply dealers as "mirror glasses" and are definitely worth purchasing.

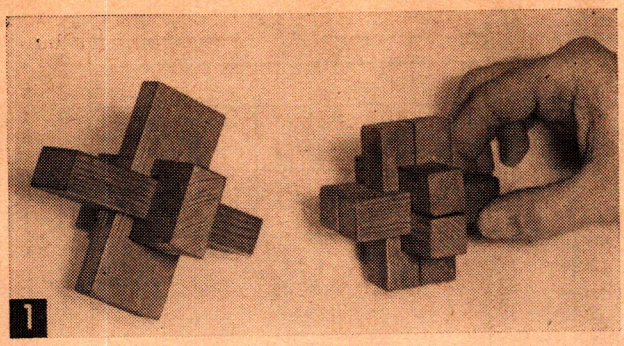
Chew Two Strings into One

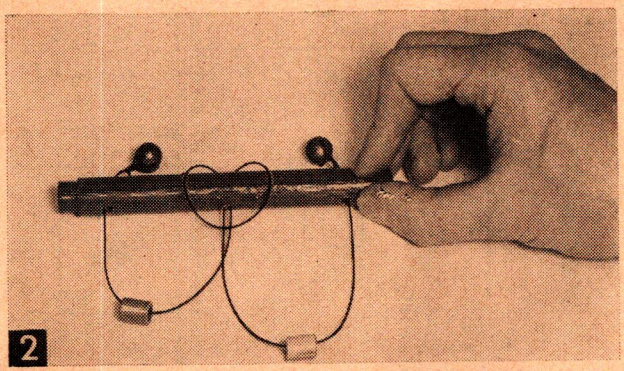
• Begin by holding up what appears to be two 6-in. lengths of string, as shown. Stuff them into your mouth and chew. Five seconds later, reach into your mouth, grasp an end of the string—and draw out one long piece!

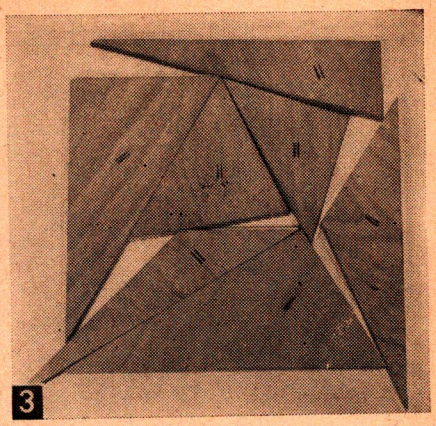
You started, of course, with a piece of string about 12 in. long, and another about 1½ in. long. Before holding them up, bend each in the middle; then hold both bends between the thumb and forefinger (as in the first photo) so that the ends of the short string look like continuations of the ends of the long. Once the strings are in your mouth, get rid of the short one by tucking it between gum and cheek with your tongue.

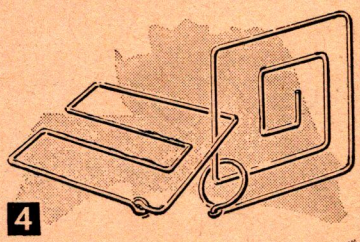


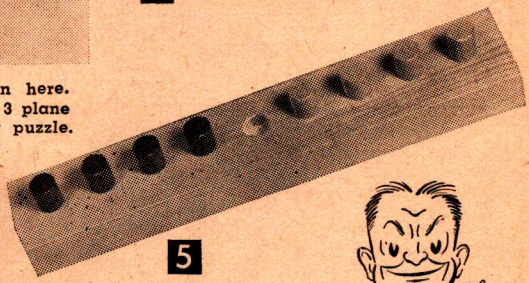








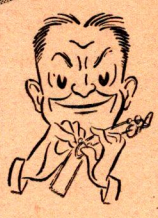




Six of the eleven puzzles in this article are shown here. Fig. 1 block or burr puzzles, Fig. 2 string puzzle, Fig. 3 plane geometry puzzle, Fig. 4 wire puzzle and Fig. 5 peg puzzle.

Making and Solving PUZZLES

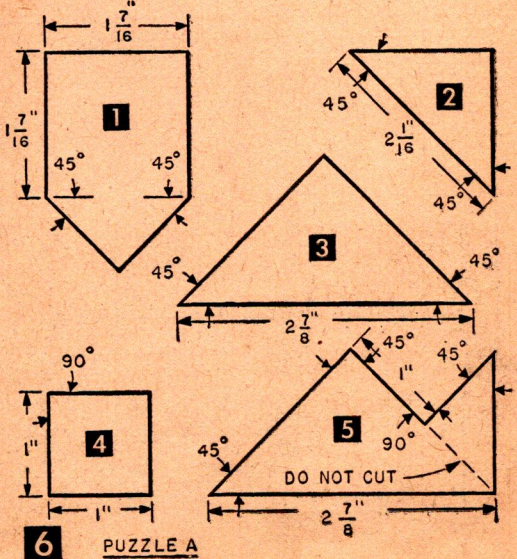
By JERRY SLOCUM

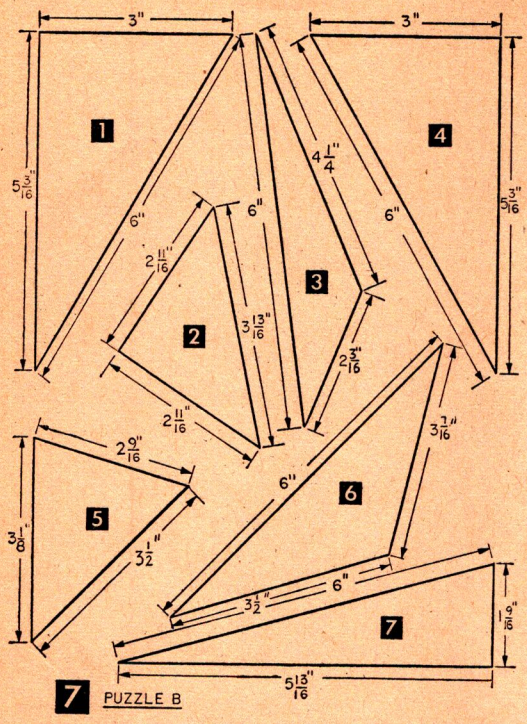


Craft Print
Project No. 230

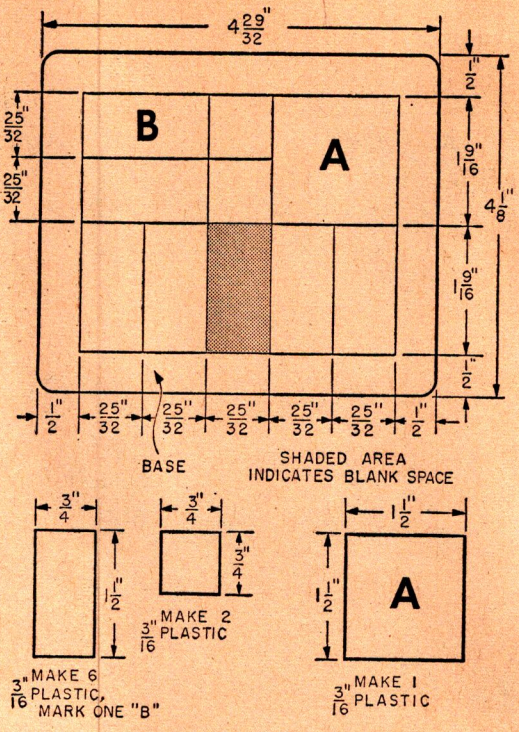
DESIGNING, making and collecting puzzles is an interesting and entertaining hobby that you can share with everyone. Since the puzzles are made from bits of wire, wood, plastics, string or cardboard, it costs practically nothing to make them. Puzzles make excellent gift items and if you are looking for an item to make and sell, these puzzles should find a ready market.

Different types of puzzles appeal to different people. For example, plane geometry puzzles as in Figs. 3 and 6 interest women who enjoy sewing, because solving these puzzles is somewhat like arranging paper patterns on cloth. Artists, engineers and draftsmen, because of their ability to visualize in three dimensions, like the wire or burr puzzles (Figs. 1 and 4). Single-plane manipulation puzzles (Figs. 8 and 9) appeal to people who like to plan things ahead, because several





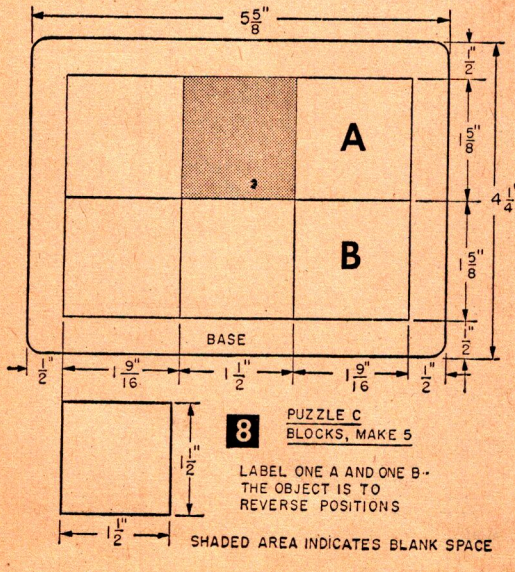
7 PUZZLE B



advance moves can be "seen" and anticipated before they are actually made. Carpenters, cabinetmakers and people who like to work with wood will appreciate the puzzles in Fig. 1.

Detailed instructions for making 11 different puzzles follow. After making, test your skill at solving them and then check with the solutions on pages 111 and 112.

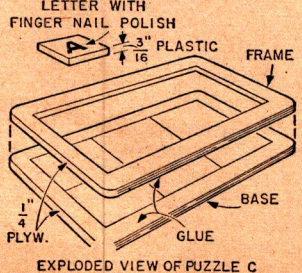
Puzzles A and B. These are plane geometry puzzles and probably the easiest to make. Lay out the pieces as in Figs. 6 and 7 on cardboard, plastic or plywood and cut them out. Cutting up a square marked out from the solution of the puzzle takes away the challenge of solving the puzzle yourself. If plywood is used, lay out the pieces so that the wood grain is running in a different direction on each piece (Fig. 3). Otherwise the grain may give a clue to the solving of the puzzles. The object of each puzzle is to arrange the pieces to form a perfect square. There are two solutions to puzzle A (Fig. 6), one including the use of piece 4 and one without using piece 4. Often these types of puzzles can be arranged to form other shapes such as a tee or cross for the solution.



8 PUZZLE C BLOCKS, MAKE 5

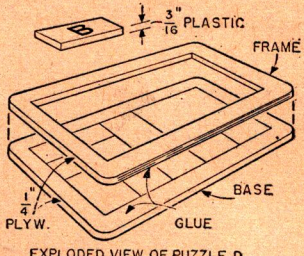
LABEL ONE A AND ONE B. THE OBJECT IS TO REVERSE POSITIONS

SHADED AREA INDICATES BLANK SPACE



EXPLODED VIEW OF PUZZLE C

9 PUZZLE D

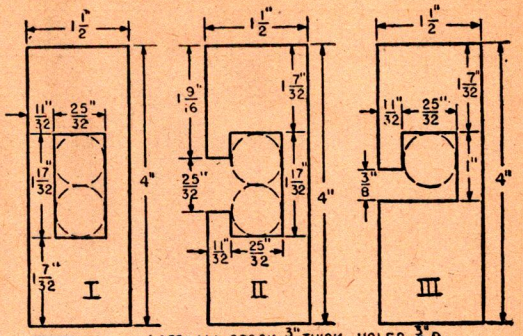


EXPLODED VIEW OF PUZZLE D

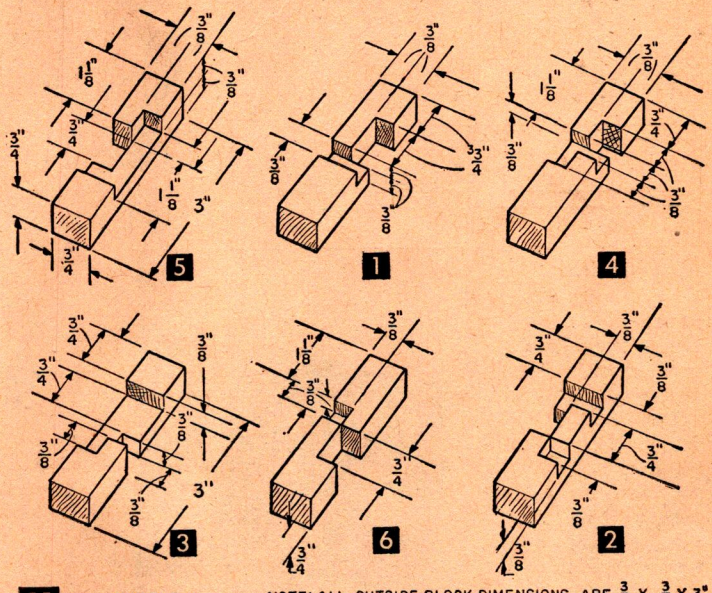
Puzzles C and D. These are movement puzzles, the solutions to which result from the interchanging of the lettered blocks (Figs. 8 and 9) by sliding *(not lifting)* the blocks within a frame. Make the

base and frame of ¼-in. plywood and glue together. Then cut the blocks from clear 3/16-in. thick *Lucite* or *Plexiglas* plastic and letter two of the blocks as in Fig. 8 or 9. The solution to puzzle D, although similar to puzzle C, is a bit more complex because the free space is only half the size of part A.

Puzzles E and F. Block or burr puzzles can be made in many designs and shapes. Two assembled puzzles are shown in Fig. 1. Try puzzle E (Fig. 10) first because it is easier to make and solve than puzzle F (Fig. 11). Any type of wood can be used; however, birch, mahogany or walnut is best because woods of this type wear better than soft woods and are easier to work than the harder woods. The notches (Fig. 10) can be roughed out on a circular saw or bored out. The slots should be loose fitting enough to permit the blocks to slide, yet tight enough to hold the assembled puzzle together. After solving puzzle E, work on puzzle F which has six pieces and is much more difficult to solve. The key to solving any burr puzzle is to notice the various notches on each piece. The sides on which the notches go all the way through are on the inside face of the assembled puzzle. Another clue is the interior volume of the puzzles. The total volume at the joint must be filled by parts of the several pieces.



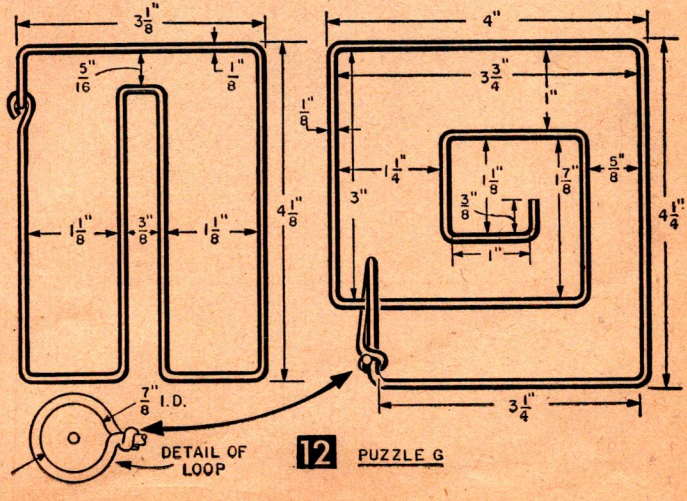
10 PUZZLE E



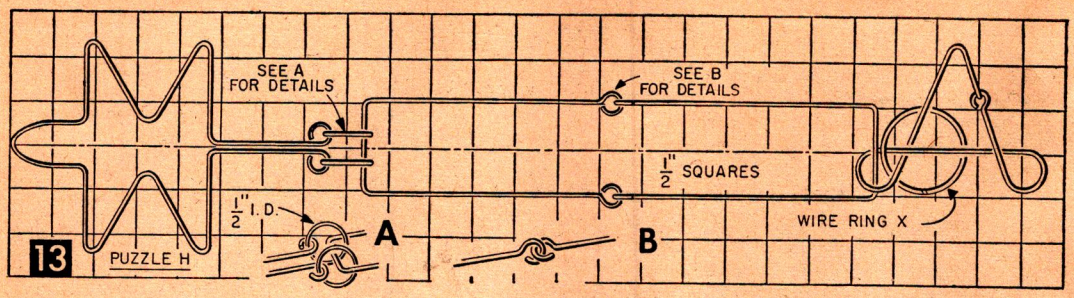
11 PUZZLE F NOTE: ALL OUTSIDE BLOCK DIMENSIONS ARE ¾ X ¾ X 3"

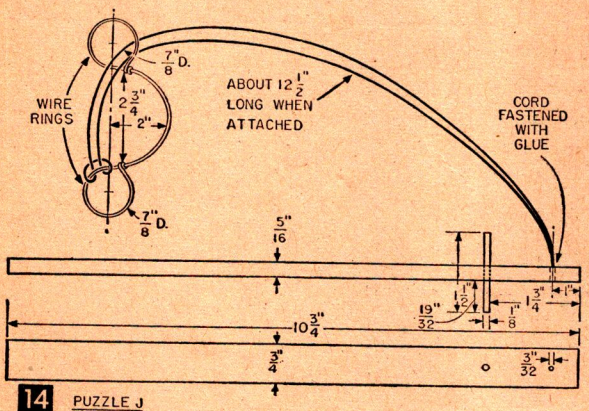
Wire Puzzles G and H. These are fairly easy to make, requiring only a pair of pliers and a few wire coat hangers or baling wire. Details for making two puzzles of this type are given in Figs. 12 and 13. The object of puzzle G is to either put the two pieces together as in Fig. 4 or take them apart. Either course can be equally intriguing. The object of puzzle H is to remove the wire ring X in Fig. 13 and then replace it. Clues to look for in solving this type of wire puzzle are the relative sizes of the loops and rings because one must pass within or over the other.

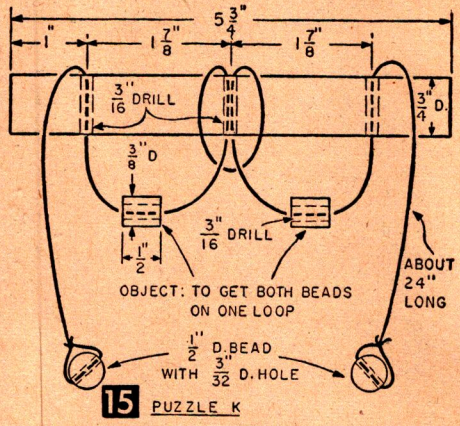
String Puzzles J and K. These puzzles are usually made up of a combination of string, beads, wooden sticks and wire. The object of puzzle J (Fig. 14) is to remove the wire rings, and then replace them. In puzzle K (Fig. 15) the object is to get both beads

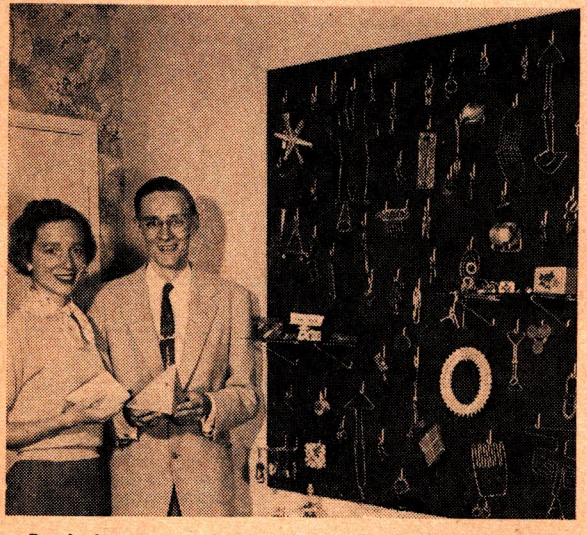


12 PUZZLE G



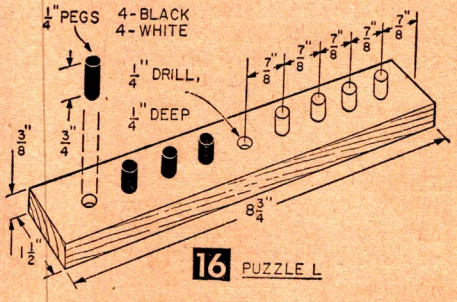






Puzzle inventors and hobbyists Jerry and Margot Slocum with their puzzle display board exhibiting some of their collection of 300 puzzles.

● Craft Print No. 230, in enlarged size for "Making and Solving Puzzles" is available at $1.50. SPECIAL QUANTITY DISCOUNT! If you order two or more craft prints (this or any other print), you may deduct 25¢ from the regular price of each print. Hence, for two prints, deduct 50¢; three prints, deduct 75¢, etc. Order by print number. To avoid possible loss of coin or currency in the mails, we suggest you remit by check or money order (no CODs or stamps) to Craft Print Dept. 2151, SCIENCE and MECHANICS, 450 E. Ohio St., Chicago 11, Ill. Now available, our new illustrated catalog of "196 Do It Yourself Plans," 20¢. Please allow three to four weeks for delivery.



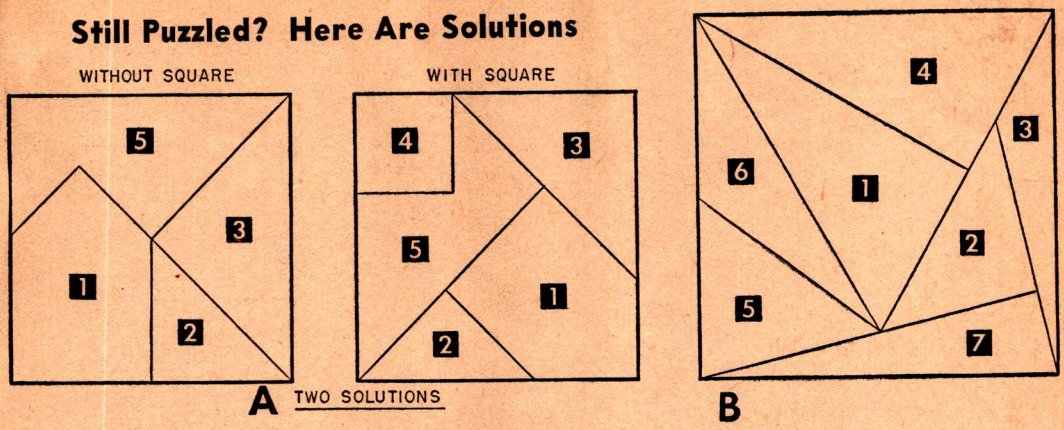
on the same loop.

Some clues to help you solve string puzzles are: the length of the string, the size of the holes and whether the string is permanently fastened to the support bar as in Fig. 14 or if the string is pulled through a hole in the support bar as in Fig. 15. A long string indicates large loops can be made to pass various puzzle parts through. Large holes with only one string through them mean that several other loops of string can be passed through the same hole to solve the puzzle. No fair removing permanently fastened strings.

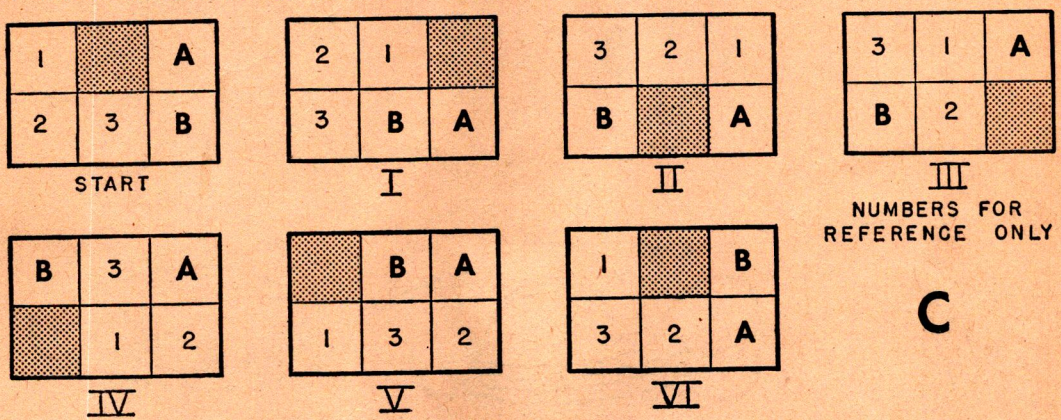
Peg Puzzle L. Make up as in Fig. 16. The object of this peg puzzle is to interchange the colored pegs by moving each peg individually into an adjacent hole or by jumping one peg only of either color. No pegs may be moved or jumped backward.

You can also improvise this puzzle from perforated hardboard or tile.

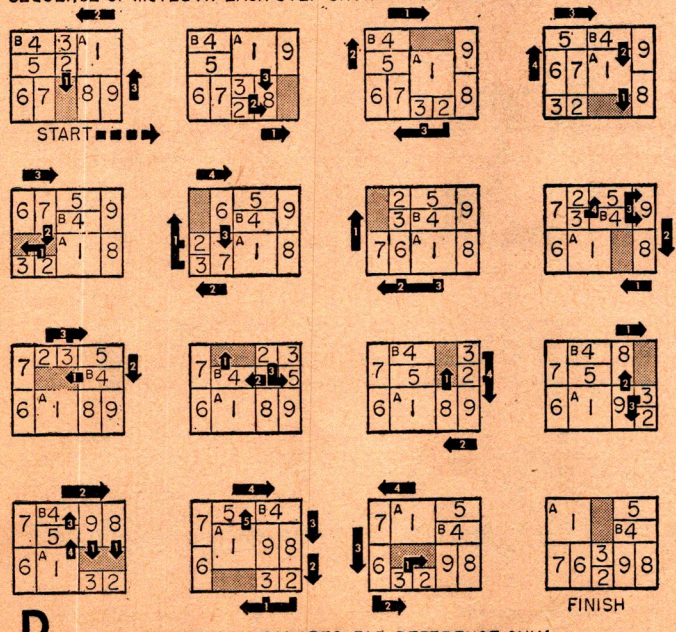
Still Puzzled? Here Are Solutions

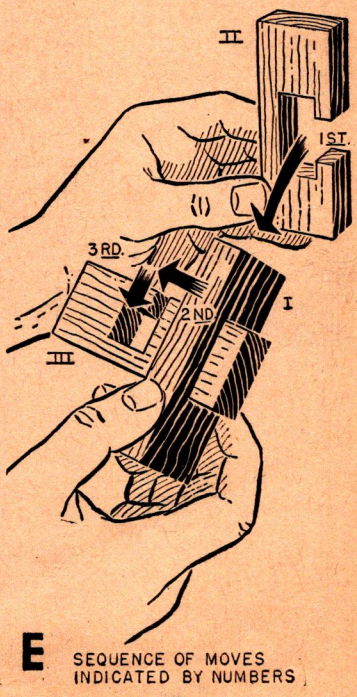


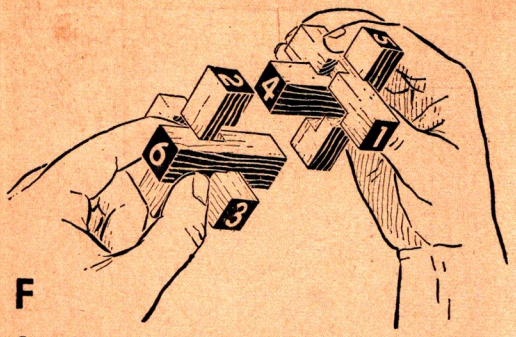
APPROX. THREE MOVES BETWEEN EACH OF THE DIAGRAMS BELOW



SEQUENCE OF MOVES AT EACH STEP SHOWN IN BLACK NUMBERED ARROWS

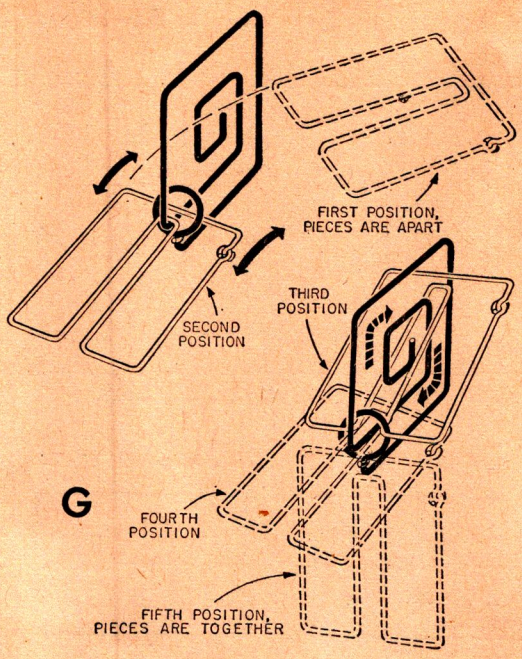




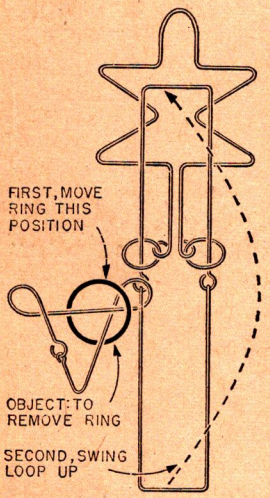


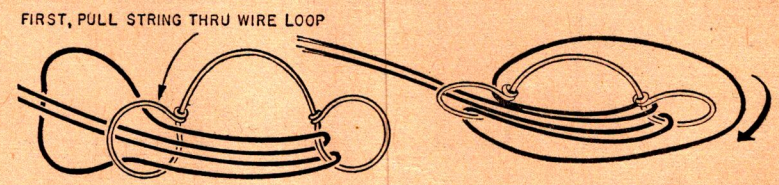
F

Assemble pieces No. 1, 4 and 5 in one subassembly, and No. 2, 3, and 6 in another subassembly, then slide the two groups together, with No. 4 sliding alongside No. 6.

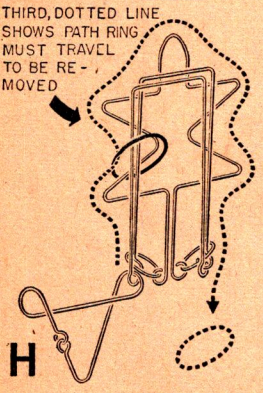


G

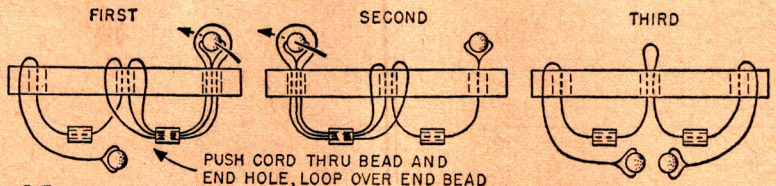




J

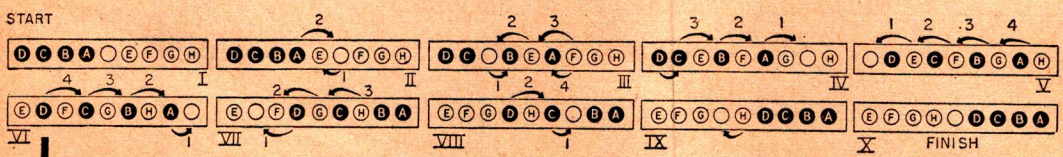


H



K

To solve above puzzle, first get both beads into one central loop by working the cords out of the center hole as shown in Steps No. 1, 2 and 3. Then replace the looped cord through the center hole with the beads on one side by retracing steps used to get center loop off.



L LETTERS FOR REFERENCE ONLY

At each stage, moves are marked in sequence. Moves shown above diagram are jumps; moves shown below diagram are moves to an adjacent hole.

A Taste of Oriental Magic

Chinese Rice Canisters

1

Lifting of ordinary can showers other canister with twice as much rice as anticipated.

SIMPLICITY is the keynote of Chinese magic, yet it is filled with surprises. A prime example is the triple kick you can give your audience with the rice canister trick, performing it with all the eclat of the famous Chinese wizard, Ching Ling Foo.

After filling one well-ornamented canister with rice, place it mouth-to-mouth with a similar container and shake quickly. Lift the top canister and—behold!—the rice has doubled in quantity, continuing to pour out after filling the other canister, as in Fig. 1.

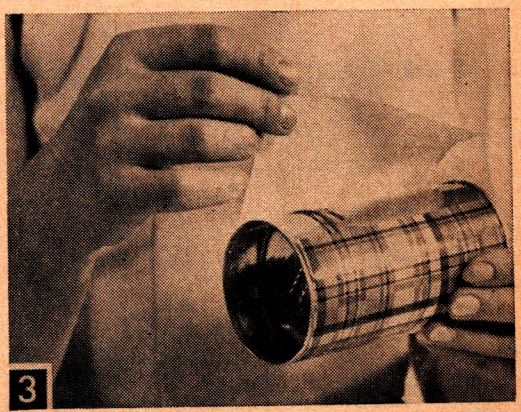
Level the rice across brim of the filled container, then cover the top with a piece of tissue paper and hold paper in place with a rubber band. When you punch a hole in the paper top, the rice has mysteriously disappeared!

As a modern Ching Ling Foo, you can now reach inside and pull out dozens of colorful silk handkerchiefs—more than it seems the canister could possibly contain!

Prepare the Fancy Containers from ordinary tin cans having the same diameter and as close to the same height as possible. We chose a typical condensed soup can 4 in. high, a sandwich-type can 2 in. high and one 6 in. high which contained ripe olives.

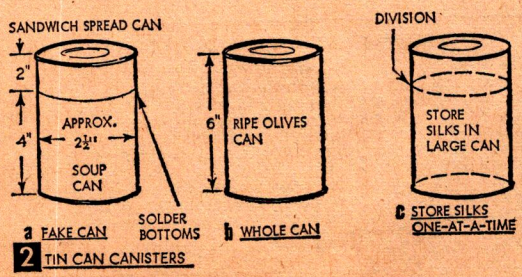
Remove tops cleanly from the cans with a good can opener, then join the two smaller cans bottom to bottom as in Fig. 2A, using liquid solder. They will now appear as one can (canister (a)) having dimensions similar to the 6-in. can (canister (b) in Fig. 2).

Touch up the inside compartments of (a) with dead black to avoid showing their short depths; also paint the inside of (b). Now wrap a fancy paper around each can to make them look more alike. Especially suited is a

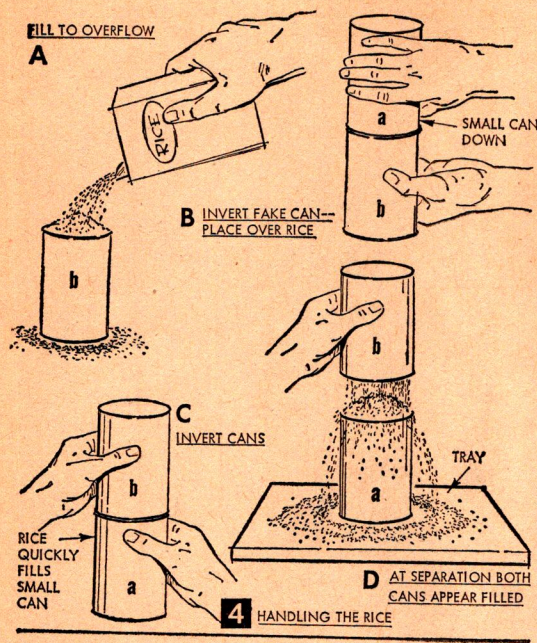


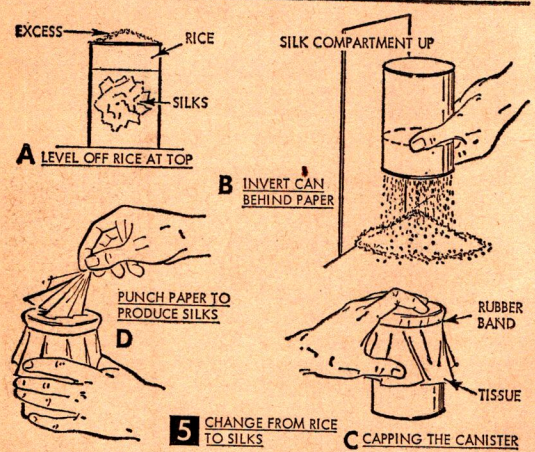
3

Piece of gift wrapping paper is fitted and attached to each canister with glue or tape. Lines in this plaid design help to disguise bottom rims of two cans soldered together to appear as one can but actually provide two compartments.



2 TIN CAN CANISTERS





gift wrapping paper with a plaid design, such as sold in stationary and card shops. Trim the paper to fit each can as in Fig. 3 and hold in place with a little glue or cellulose tape.

You will need enough silks of various sizes to load the larger section of canister (a). As you pack and compress them (Fig. 2C), interlock corners until silks nearly reach the top. Then use a dark silk (black or blue) to cover the rest.

Begin the Performance by presenting the canisters and other props on a tray of about 12 x 18 in. in size, or large enough to work the trick without spilling rice over the edges. Set canister (a) with loaded end down, (b) with open end up. Then add a box of rice, a sheet of dark tissue paper about 12 in. square, and a large rubber band. You may prefer to place the paper and band on a nearby table.

Now pick up canister (a) with one hand and turn its shallow end toward the audience, but keep it moving back and forth. Then turn it almost straight down and give it a final shake as if to "prove" it is empty. If a test shows this gives too much of a glimpse of the interior, simply pick up (a) and turn it down in a sidewise manner; then give it a shake to emphasize its "empty" condition.

Keep Both Hands Busy. Immediately pick up canister (b), turn its open end toward the audience, tip it downward and shake in the same way. Do this more slowly and pause long enough to give the audience a straight look into (b). Next, turn (a) back in upright position, in a sidewise fashion, and replace on tray with shallow end up.

Transfer canister (b) from one hand to the other, clearly showing it to be empty. Finally, hold it up in your left hand, pick up the box of rice and pour until (b) is full (Fig. 4A). Stop at different levels to show the rice, by tilting the canister toward the audience. The white rice will be seen easily. All this stress on (b) helps build the idea that (a) is every bit as empty. Later, people will think you displayed both canisters the same way.

When (b) is filled to overflowing, pick up (a) and turn its shallow top down to plant it squarely on (b) as in Fig. 4B. Do this with the right hand, starting with palm down and finishing with palm up. At the same time, steady (b) with the left hand, palm up.

Now, raise your hands in a high, sweeping style, being careful to keep the mouths of the canisters together, and turn them over as in Fig. 4C so that you can set them down with (b) on top of (a). As you slowly lift (b), announce that the rice has doubled, filling both canisters. Since only the shallow top portion of (a) is filled, the downpour from (b) will be terrific (Figs. 1 and 4D).

Tissue Hides Sleight of Hand. Show (b) to be empty and set it down open side up. Say that you will level off the rice in one canister (Fig. 5A) and do so with (a). Pick up the sheet of dark tissue paper, while pointing out that you will cover the canister of rice. Start to do this, then show canister (a) again, brushing a little more rice off the top.

Hold the tissue downward in your left hand and place it in front of (a) as in Fig. 5B, so

MATERIALS LIST—CHINESE RICE CANISTERS

No. Req.	Size and Description
2 doz.	silk handkerchiefs, assorted sizes and colors
1	2½" dia. x 6" tin can (full canister)
1	2½" dia. x 4" tin can (silk compartment)
1	2½" dia. x 2" tin can (rice compartment)
Note: diameter of cans not critical but should be same for each. Length may vary if that of two shortest cans equals large can.	
1 lb.	rice (more if larger set of cans is used)
1 pc.	12 x 12" gift wrap paper, plaid design (can covers)
1 pc.	12 x 12" dark tissue paper (rice compartment cover)
1	12 x 18" serving tray
Misc.	½ pt. dead black paint, glue or cellulose tape, rubber band

that it hides the canister and tray completely. The instant these are covered, move your right hand and grasp the canister with palm facing up. Quickly, but quietly lift the canister behind the cover just enough to turn it over as in Fig. 6. The rice in top compartment will then fall on the tray to join the rest of the rice as in Fig. 5B.

As soon as you have turned the canister, bring your hands higher so that the left one can fit the center of the tissue paper squarely over the canister. This, being inverted, now has the silk compartment on top. Put on the rubber band to hold paper tightly in place.

Announce to your audience that you will now change one famous Chinese product (rice) into another (silk)! Punch through the tissue paper, reach inside and produce the silks rapidly as in Fig. 5, heaping them high on the tray one after the other.

At the finish, remove the rubber band and torn paper, then place canisters side by side.

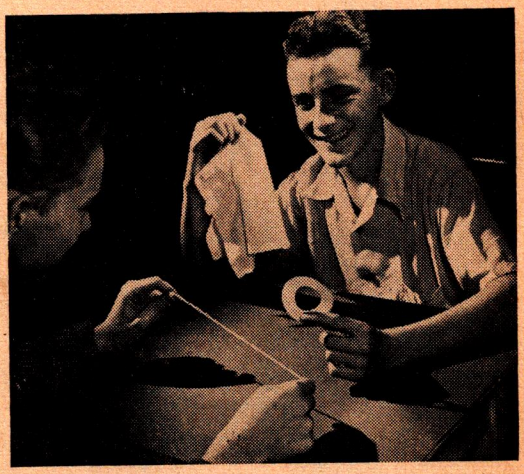
Dark tissue paper momentarily provides shield during which canister is inverted to spill out remaining rice. Then paper is attached to top of canister the audience believes is rice-filled. Instead, they'll soon see silks galore.

Written in the Cards

• Have one of your friends deal off a deck face down as many cards as he wishes after you have written the name of one card on a piece of paper, folded it, and handed it to another friend. Then have the dealt cards placed back on top of the deck and ask still another friend to deal off the same number, this time face up. Watch the expressions when they unfold the paper and read on it the name of the last card the friend turned up!

How's it done? You simply note the top card on the deck originally and write that one on the paper. A little deduction will tell you why it's the last one turned up. Let's hope your friends are not as clever as you are!

Rearranging Molecules?



• Thread a large paper washer on a string, give the ends of the string to a friend to hold, and bet the friend that you can remove the washer intact—while he still holds the ends of the string. Throwing a handkerchief over your hands to conceal the mysterious release, you grasp the paper ring, manipulate it, and in two shakes your hands emerge, with an untorn paper ring in one and the string empty.

It's done by sheer fakery. All the while, your hand concealed a duplicate ring. Under cover of the handkerchief you tore off the original ring and palmed it.

Say the Mystic Word and

Confetti Becomes Candy

★ **Pass out magical sweets and make a hit with the younger set**

POPULAR with the younger members of an audience is the confetti-candy switch because it offers a surprise ending for the stomach as well as the mind.

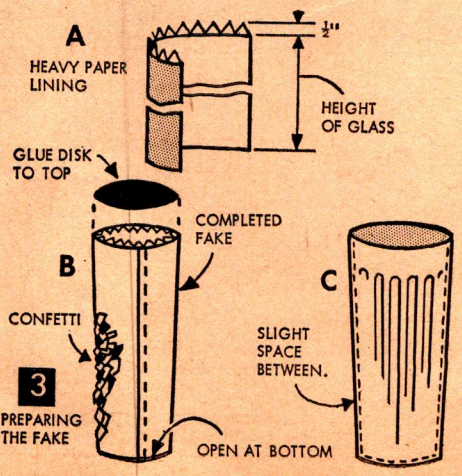
The magician shows an empty glass, dips it into a box of confetti and fills it to the brim. Over the glass, he places a paper cone (Fig. 1), recites a few magic words, and then withdraws the cone as in Fig. 2. The confetti has mysteriously changed into candy, which he promptly distributes among the spectators. Glass and cone are shown to be empty, without a trace of confetti.

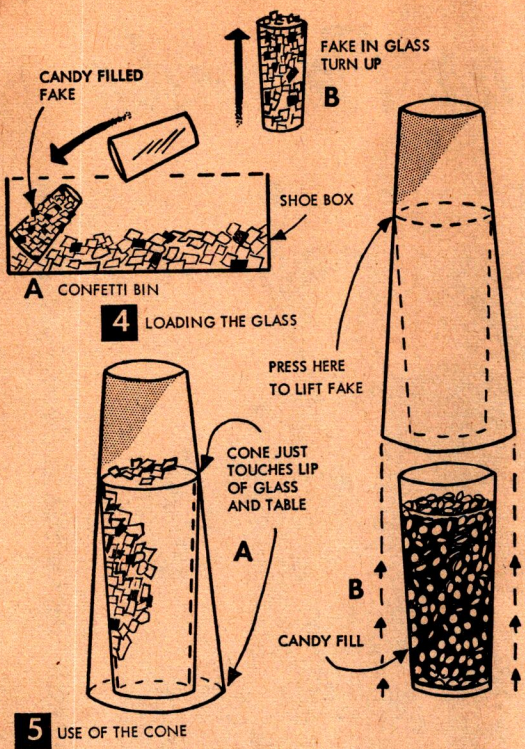
A Special Fake is the making of this trick and you need only a small sheet of stiff paper and a little glue to prepare it. Roll the paper —which can be art construction paper, light Bristol board, or a flexible cardboard—to fit the inside of a glass with slanting sides.

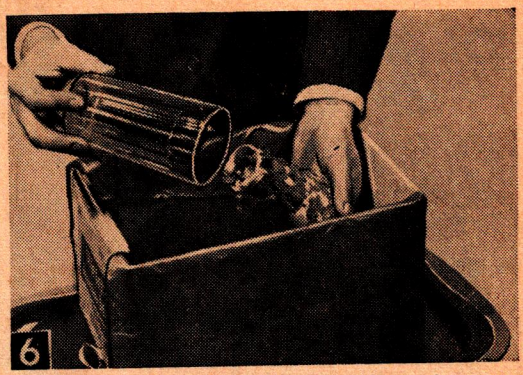
Extend the roll to the glass bottom and trim excess length after allowing for enough overlap for glueing. Mark height opposite lip of glass and also ½ in. above that point. Remove paper, lay it out flat, and cut paper across at top mark. Score slightly at line ½ in. from top and fold it. Now replace in glass and overlap to allow just a slight space between glass and paper. Remove paper while holding it in position and glue sides together.

Now cut a disk of ⅛ in. greater diameter than that of the glass lip, center it over the folded top edge of the fake and glue it in place. Coat outside and top of the fake with light glue and cover these surfaces completely with confetti.

Simple cone from stiff paper acts as undercover agent during "candy-making." At left, it covers tumbler apparently filled with confetti. Moments later, after a wave of a wand or an appropriate magic word, it is raised (right) to reveal the tiny, colored candies.







Overhead view to show what the audience does not see. The magician is expected to dig in for a glassful of confetti, but instead he slides the glass over candy-filled fake.

Make a Confetti Bin by selecting a shoe box or other deep, oblong container about three times as long as the glass you are using. Fill the bin with enough confetti to scoop up by the glassful.

Invert the paper fake and fill it with small, hard sugar-coated candies such as *M&Ms*, then place it in one corner of the confetti bin as in Fig. 4A. Prop it in place with confetti so that candy will not fall out.

Shape a cardboard cone so that it will just fit over the glass while resting on the table as in Fig. 5A. It should be nearly twice as tall as the glass. You can hold its shape with a strip of cellulose tape and, for atmosphere, decorate to suit with various colors and oriental decals.

Place your prepared confetti bin on a table so that your audience cannot see into it, set the empty glass and cone at one side, and you are ready to perform the trick.

Pick Up the Glass, show that it is plainly empty, then dip it into the box and bring it out half-filled with confetti. Be careful not to disturb the candy-filled fake. Pour the confetti back into the box, then dip the glass in once again, this time obviously to the bottom as if to intentionally fill it completely. Instead, slide the glass over the fake (Figs. 4A and 6) and turn upright as you lift it out of the box.

Be sure that the fake is all the way in the glass so that candy will make no sound when you turn it up. Hold the glass in your right hand while your left adds some loose confetti on top and helps press the fake in place at the same time. As far as the audience is concerned, you are merely bringing the glass out filled with confetti.

Now hold the glass at the bottom with your left hand, while you pick up the cone with your right and show that it is empty. Place cone over the glass as in Figs. 1 and 5A. Your right thumb and forefinger will feel (through the cone) the fake's edge projecting above the glass lip.

This is the time to voice your magic words. When they have had their effect, press through the cardboard and lift the cone to carry away the fake with it as in Figs. 2 and 5B. The glass is full of candy.

Dispose of the Fake immediately. Extend the glass of candy with your left hand to hold audience attention as the right lowers the cone to the corner of the confetti bin and drops the fake. Now you can walk forward, offer the candy and show the cone to be empty. Afterward, replace cone and glass on the table.

If the fake tends to stick in the cone, tap the cone slightly against the corner of the confetti bin to dislodge it. The audience will be too absorbed in the candy glass to notice you.

You can use a very tall glass for a more impressive performance, provided that you also use a proportionately larger box and other props. Everything used in this trick can be stored in the box when not in use.

MATERIALS LIST—CONFETTI INTO CANDY

No. Req.	Size and Description
2 pcs.	8½ x 11″ art construction paper or light Bristol board (fake, cone)
1	water glass (any tumbler or goblet with slanting sides)
1 pkg.	colored confetti (amount depends on size of box)
½ lb.	small, hard sugar-coated candies
1	large shoe box or corrugated paper box (confetti bin)
Misc.	glue, optional decals, and coloring for cone

Mystify Your Friends

Produce Beautiful Silks From Empty Box and Tube

By VICTOR D. DRESSNER

Well, well, what have we here? A beautiful blue silk handkerchief and a red one right behind it. Something else is coming, too. It's a bright yellow one. Little magic box, are you all through? No, wait a second. Something seems to be moving down there. I'll wave my magic wand and—easy now—out comes a deep purple silk.

PRESTO, change-o, a-la-ga-zamm! Just look at this fine handkerchief conjured by magic.

Have you ever watched a magician coax colorful silks from an apparently empty box as in Fig. 1 and wondered how he did it? By making the box from scrap plywood or hardboard and adding a few simple props, you can perform this standard magical feat with all the aplomb of a professional. If you have hardwood plywood, so much the better.

Cut four pieces of plywood for the box sides as in Fig. 2 and open up the front panel so your audience will be able to look into the box. Miter the side edges as in Fig. 2A to hide exposed plywood edges and add strength to the joints. Assemble with glue and brads. If you cannot conveniently shape the miters, cut sides ½ in. narrower and butt the front and back pieces to them.

Build a Square Platform for the box as in Fig. 2 and glue short legs cut from a dowel to the under side. Your subjects will thus be assured that nothing can enter the box from below. Paint the platform, inside of the box, and all exposed edges flat black. Finish the outside with varnish or shellac and decorate with colored decals or stencils.

We cut the metal tube (Fig. 2) out of a discarded section of rain leader, but small stove pipe will do or you can shape the cylinder from sheet metal. Paint the inside flat black and the outside a vivid red enamel, adding a contrasting decal as a distraction.

Secret of the Trick is a selection of mailing tube about ⅝ in. narrower and 1 in. shorter than the metal tube (Fig. 2). Cut a thin cardboard disc to the outside diameter of the smaller tube and attach it across the bottom with glue and black cloth tape.

Cut off the top and foot portions of a man's black cotton or rayon sock, so that the remaining portion is ½ in. longer than the cardboard tube. Stretch this sleeve over the tube to cover the outside and fold the excess length over the top to the inside. Glue sleeve in place at bottom and inside top. Touch up exposed tube inside with flat black. It will

then be invisible when viewed through the box openings.

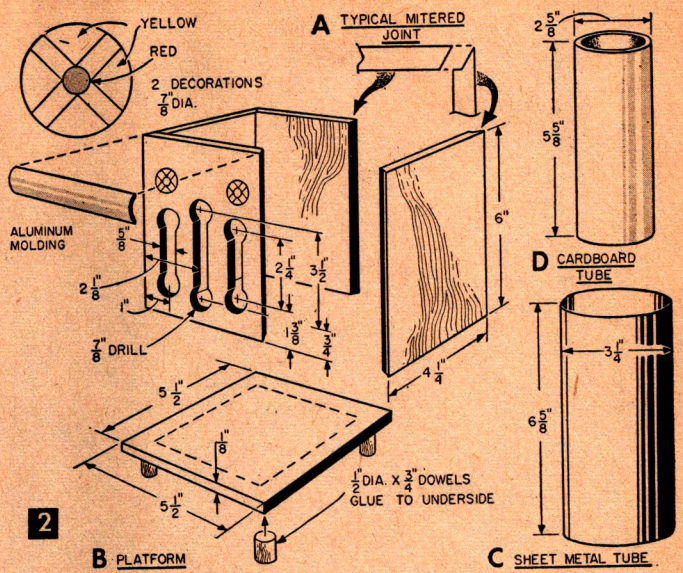
Now you can pack the black tube with various colored silks —handkerchiefs or small scarves—but be sure that none will show. Center the tube on the platform, slip the metal tube over that with the decal facing front, and place the box over both tubes.

Performance. Always present this trick at or above the eye level of your audience. If you do not have a stage or platform, use a high chest or try a cabinet over a table as in Fig. 1. Place the magic box assembly in position and announce that you will produce colorful silks before their very eyes.

Wave a "magic wand" over the box, then pick it up and hold it so all can see through it (Fig. 3). Any stick painted black will serve as a wand—we used a mixing stick that is available free at most paint stores. Poke the wand through the box to show that the ends are really open, then offer to pass the box around. Right after you replace box on the platform, *never before*, pick up the metal tube, show that it is empty (Fig. 4), and pass it around. Return the tube, being careful not to bang it into the invisible tube concealing the silks.

Now with a flourish of your wand and an appropriate mystic word, reach into the tube and slowly pull out one of the silks. Wave it over your head, then reach in for another. Pull slowly so that you don't accidentally draw two silks at once. For added effect, hesitate a bit before revealing the last silk, then coax it out after making the audience believe the silk producer was through. This trick will always be effective as long as you keep the inner tube hidden.

Dress the part, develop a suitable spiel and you're set to confound your friends.



2

MATERIALS LIST—MAGIC SILK BOX

No. Req.	Size and Description
4 pcs.	1/4 x 4 1/4 x 6" hardwood plywood (box sides)
1 pc.	1/8 x 5 1/2 x 5 1/2" hardboard (platform)
4	1/2" dia. x 3/4" dowels (feet)
1 pc.	1/2 x 4 1/4" aluminum molding strip
1	3 1/4" dia. x 6 5/8" long sheet metal tube, stove or rain pipe (outer tube)
1	2 5/8" dia. x 5 5/8" long section of cardboard mailing tube (silk holder)
Misc.	colored decals or stencils for optional decoration of box and tube, man's old black sock, 4 or 5 colored silk handkerchiefs, cardboard scrap, black tape, flat black paint, varnish or shellac

3

You can see this simple little box is quite empty and I can pass my magic wand through it easily.

4

Here we have an open tube made of ordinary thin sheet metal. Once again, note nothing is inside.

1

How to Perform the Famous

Vanishing Bowl of Water

Last look the audience has of bowl. Immediately after covering, the magician lifts it up and waves the handkerchief. To everyone's consternation, water and bowl have disappeared.

HERE is a stage mystery that can be presented on almost any platform—or at even closer range—as part of a magic show routine. It is a colorful, even spectacular trick which you can make up mostly from materials found in the home and, after a little practice, perform with alacrity.

The magician shows a small, decorative bowl and fills it with water from a pitcher. He places the bowl on a tray held by an assistant, covers the bowl with a large handkerchief, then carries it forward as in Fig. 1. Moments later, he suddenly whisks the handkerchief and—presto—the bowl is gone!

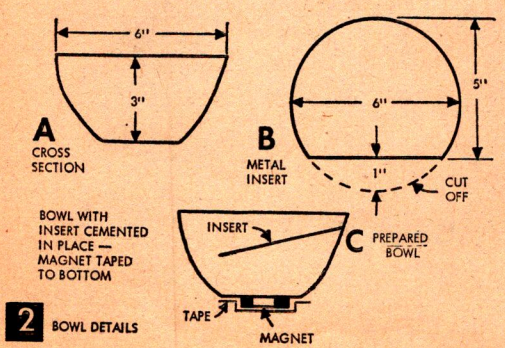
A Very Special Bowl is responsible for the effectiveness of this trick. Choose one with a shape and size approximately matching the cross-section in Fig. 2A. It should be made of aluminum or other material to which a metal cement will make a waterproof bond.

Shape an aluminum disk of slightly smaller diameter than that of the bowl top and cut off a 1-in. segment on one side as in Fig. 2B so that it will fit snugly inside the bowl as in Fig. 2C. You will greatly simplify the operation by first fitting a sheet of stiff paper or thin cardboard to the bowl, then transferring this template to the metal sheet. Position the disk with proper tilt as in Fig. 2C and cement in place using an epoxy resin adhesive or other glue satisfactory for bonding metal to metal, glass or ceramics.

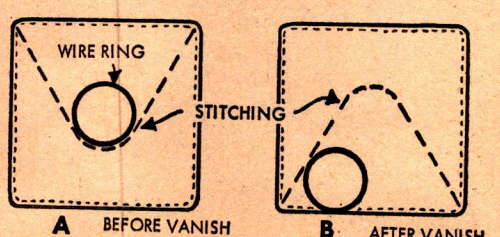
Underneath the bowl, attach a small but powerful magnet (Fig. 2C). Since the bowl will be held in the hand or rest on a tray, this will probably not be noticed, but to be sure, hide it with a strip or circle of gummed paper colored to match the bowl.

Select a tray made of steel so that it will be attracted to the magnet and hold bowl firmly in place.

The "handkerchief" should be at least 18



2 BOWL DETAILS



3 2-PLY HANDKERCHIEF

in. square and is actually two identical handkerchiefs stitched together at the hems. Before stitching one side, insert a wire ring of the same diameter as the bowl top. You can use bell wire, hookup wire or a type strong enough to hold its shape unless purposely bent. File ends smooth at the joint so they will not tear or catch on the cloth.

Added stitching is advisible as a guide for the ring. Sew to form a triangle from the two front corners to a point beyond the center, as in Fig. 3A and B, so that when you hold handkerchief up, the ring will be approximately centered.

You Require an Assistant who walks "on stage" from the wings or a screened-off area carrying the tray which bears the bowl, handkerchief, and a pitcher of water. Once you start, the entire trick can be run off quickly and be finished before your viewers can catch their breath.

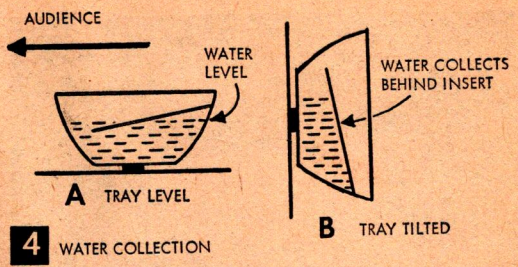
Pick up the bowl, pour enough water in it from the pitcher to fill it about half way, and put pitcher down on a table. Replace bowl on the tray with cutout segment of the metal insert toward the front as in Fig. 4A. Next, spread the handkerchief and pick it up at the two front corners (Fig. 1) so that the ring will slide to the center. Drape the cloth over the bowl.

Normally, you will be working from the left side, as you face the audience, while your assistant faces you, as shown in the illustrations. The assistant holds the tray so that the long edge faces the audience. The right hand is at the front corner and left extended more along the back edge to keep the tray balanced.

Now, place the wire ring over the bowl and lift the cloth slowly, leaving the bowl on the tray. As the cloth rises, your assistant lets go with the left hand and lowers the tray with right hand so that the bottom of the tray comes into view of the audience by the time the handkerchief is out of the way (Figs. 5 and 6). The audience will think you are holding the bowl underneath the handkerchief while, actually, you hold only the wire ring. The bowl is safely out of the way, held to the tilted tray by the magnet. In this position (Fig. 4B), the water collects in a compartment formed by the metal insert within the bowl.

Success of the Whole Trick depends upon perfect timing at this point between yourself and your assistant. This should come easily after a few rehearsals. The rest is clear sailing.

Advance a step or two toward your audience, holding the "bowl" beneath the cloth, as your assistant walks off stage carrying the tray and the bowl with it. Now hold the wire form with one hand, as though gripping the bowl edge through the cloth, and take a rear corner of the cloth with your other hand.



4 WATER COLLECTION

5

6

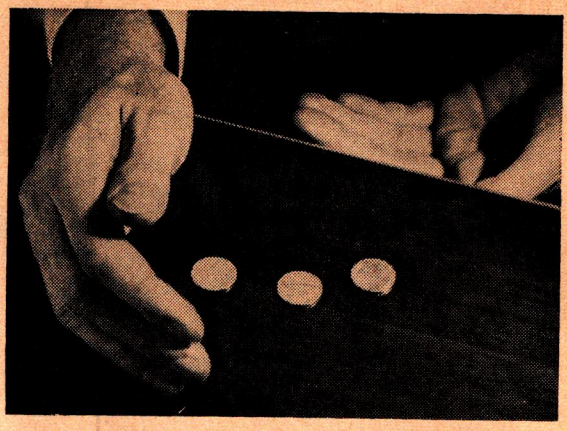
Climax is shown in Fig. 5 as the audience sees it, while behind-the-scenes view is in Fig. 6. Magician is lifting a wire shaped like the bowl top, while bowl the audience believes he holds sticks to tilting tray. Water in bowl is held behind metal insert.

MATERIALS LIST—VANISHING BOWL OF WATER

No. Req.	Size and Description
1	6″ dia x 3″ high bowl (lightweight aluminum)
1	rectangular steel tray
1 pc.	6 x 6″ thin-gage aluminum (bowl insert disk)
1	small, powerful magnet (strong enough to hold bowl half full of water on steel tray in vertical position)
2	18 x 18″ (or larger) handkerchiefs, identical design
2 ft.	#18 hookup wire or bell wire (6″ dia. wire ring)
Misc.	thin cardboard, epoxy resin adhesive, gummed paper colored to match bowl, thread, pitcher of water

Give the cloth a hard, forward shake, as if tossing the bowl out to the audience; at the same time, release the wire. Grab the other rear corner of the handkerchief, spread it, and show both sides. The wire will slide down to a front corner immediately and the handkerchief can then be laid aside or tossed to the assistant who, by this time, has returned after leaving the telltale tray offstage.

Perfect balance. Be sure your friends use a plastic glass and wear a raincoat when they try this trick. You, however, can balance a glass three-fourths full of water on the Indian head side of a nickel without spilling it. Use a coin that is not worn too smooth and set the glass edge in the indentation between the Indian's forehead and nose. This groove is deep enough to steady a carefully balanced glass.



Change three coins into four. Put three coins on the bare surface of a table, and as you brush them off and into your hand loosen the fourth coin from under the edge of the table where it was stuck with a dab of soap or a piece of gum. Use your own change because someone might give you coins that are different from the one stuck to the table. They may also want to keep the profit.

Sleight-of-Hand Tricks

Keep Audience Guessing

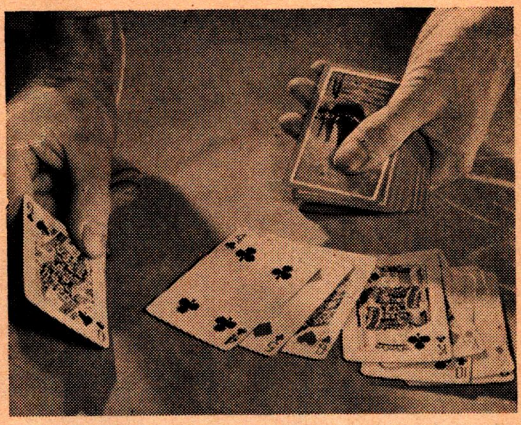
PROVE your hand is quicker than the eye with sleight-of-hand tricks that are designed to confuse your audience because you invite them to match their skills against yours in feats of magic that only *you* are able to perform.

You'll need an assistant in a few of the tricks to help you prove your powers of concentration and enable you to detect hidden objects and tell what they are. Props needed for other tricks are readily available, such as milk bottle caps, a glass of water, a few coins, and others that require little or no investment.

After a little practice you'll be able to baffle your friends for hours with these eight tricks that are sure to leave them guessing.

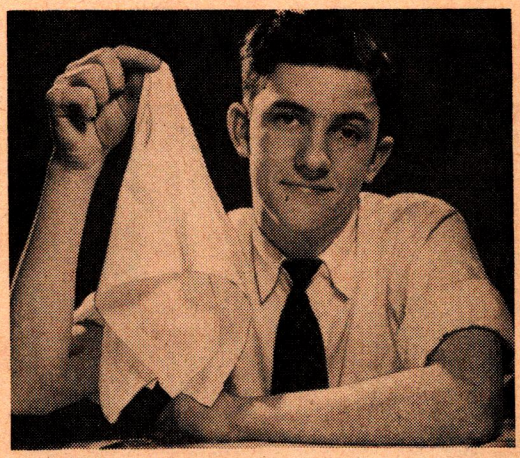
Prove your powers of concentration by naming the amount of the hidden coin. Have your assistant turn the handle of the cup in a pre-arranged direction to indicate the denomination of the coin. Don't move the handle too much or your audience will get wise.

Reverse twist to the old shell game. The magician uses his powers of perception to reveal under what cap the coin is hidden. You can do it if a friend in the audience fastens a hair to the underside of the coin with glue or a transparent tape so it sticks out from under the edge of the cap. Use a half-dollar and milk bottle caps, or any other type of cap that is slightly larger than the coin.

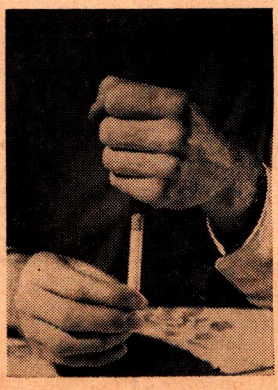


Pick the right card every time. Use a deck of cards with a one-way design on the back. Arrange the cards so all designs are facing the same way before a card is withdrawn. Carefully turn the deck around before putting the card back in the deck so the design of the one card is the only one facing a different way. Build up suspense by dealing past the card and then pick it out from the cards on the table.

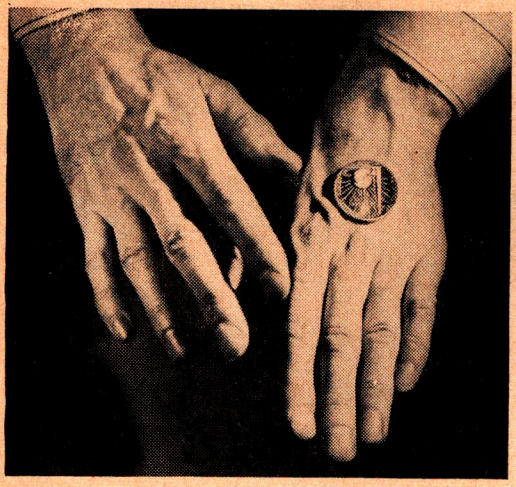
Put a matchbox up your sleeve to pull this trick off. All three boxes are empty, but one seems to rattle when you shake it. The box in your cuff has the matches in it and rattles when you shake one of the empty boxes. Move the boxes around and let someone try to pick out the right one. In fact, you can let two people try to guess which is the right box.



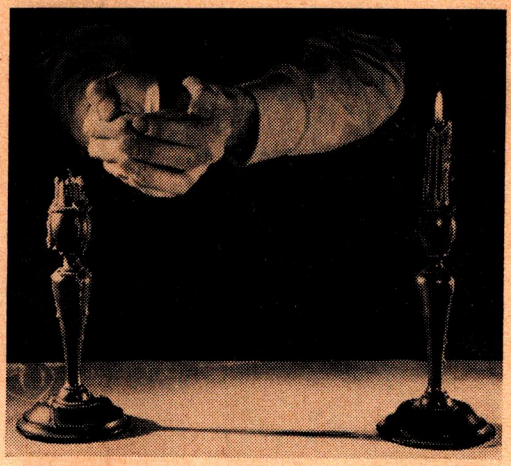
Earn extra money by making dimes disappear. Rip a few stitches in one corner of a handkerchief with a wide hem and sew a dime in place. To perform the trick, fold the corners over the sewed in coin and put the other dime on top. Carefully slide the handkerchief to the edge of the table and grasp the coins from the bottom. As you lift it aloft let the loose coin fall in your lap. Let someone feel the sewed in coin to assure your audience it is still there. After a few magic words let the corners fall loose. Easiest dime you ever earned.



A floating filter. Moving the corked end of a cigarette from one end to the other is a trick that must be done quickly—and your gimmick must be put away just as fast. Cut the cork tip from a cigarette and open the band where the ends overlap. Remove the paper from the inside and glue it back together around a plain cigarette. Start the trick (left) with the cork tip down. The cork tip will slide to the top (right) as you push it through your clenched hand and pull it out of the bottom.



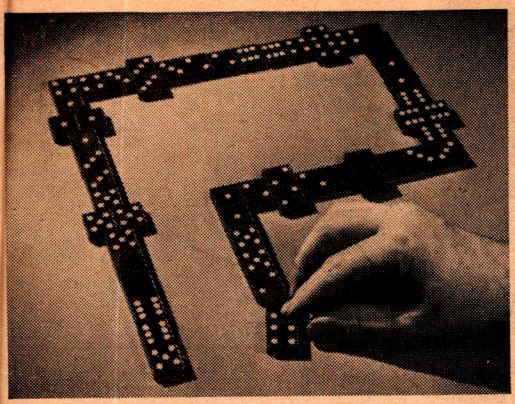
Flip a coin without turning it over. Once mastered, this trick is completely baffling, but it requires a little practice. Show a coin, heads up, in the palm of one hand. Clap it down on the back of the other hand. It still shows heads! You accomplish this feat by giving the coin a very slight toss as you turn your hand quickly over on it. Only your hand will turn, not the coin. The maneuver can be worked so fast that your friends will miss it completely.



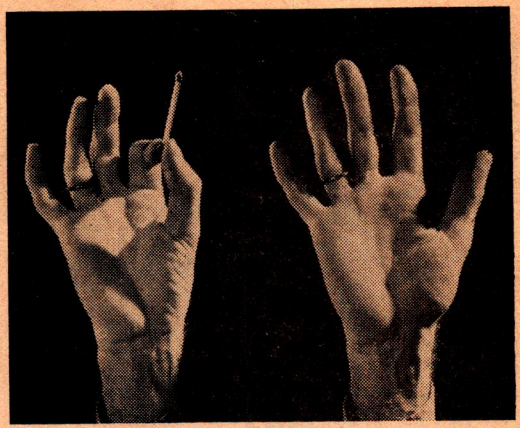
Carry fire in your hands. Light one candle in the ordinary way, then let the match go out and discard it with a remark that you don't need a match anyway. Cup your hands, hold them over the candle flame, pick up a light from it, and carry it to the remaining candles. This stunt won't require superhuman powers if you have a headless wooden match stem concealed between the two middle fingers of one hand. To extinguish it eventually, blow as if to cool your hands.

Make a paper disk jump to a coin held above it. Hold a large coin horizontally about an inch above a slightly smaller paper disk. Blow strongly through a small paper tube held close to the center of the top of the coin. Air blown past the coin produces lowered air pressure under it and over the paper disk, forcing the disk to rise.

Pick up cards with magnetized fingertips. Throw a dozen cards on the table and place the fingertips of one hand lightly on top of them. Now lift your hand, and the cards come away with it! The secret is a little handle of cellulose tape affixed previously to the back of the center card. Throw this card down first, and then throw the others so that each laps over it. When you put your fingers down on the cards, grip this little handle between the third and fourth fingers. With the remaining fingers, press other cards down, holding them to the central one.

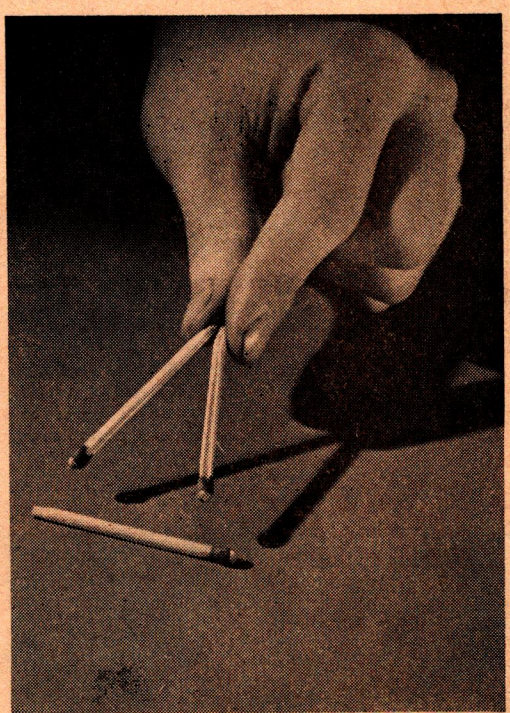


Tell the numbers on the end dominoes. Dump a box of dominoes on the table, and ask your friends to arrange them in a single line, according to the rules of the game. While they are doing this, you are out of the room: but before you return, you tell them the numbers on the end dominoes! Before you left the room, you secretly removed one of the dominoes (any one except a double). The numbers on the ends must be the same as on the domino you hold.



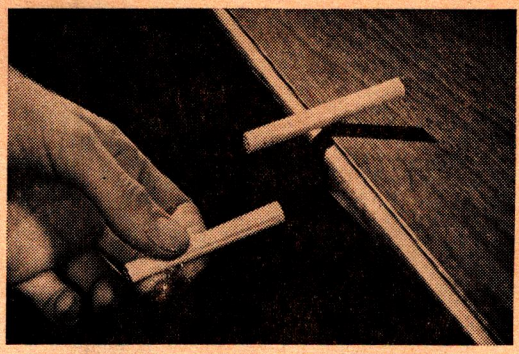
Make a match disappear. You need a loose ring on your fourth finger, and a kitchen match. Hold the match between the thumb and forefinger and show it to your audience. Then wave the hand rapidly, and the match will disappear. It is secreted in the ring behind the finger. This can be done easily by bending the middle finger out of the way into your palm as you wave.

Make the water vanish. A glass of water with two strips of paper criss-crossed over it is placed before the performer. His hands are either tied behind him or held by spectators, and the lights are turned out. The performer conjures the "spirits" to drink the water. A minute later, the lights are again turned on and, while the strips are still in place, the water is gone. The spirits are assisted by a drinking straw which the performer has previously concealed in an inside pocket. He fishes it out with his mouth, drinks the water through it, and replaces it in his pocket. Some practice is necessary to develop skill in manipulating the straw in and out of the pocket, and in and out of the glass without touching the paper strips.

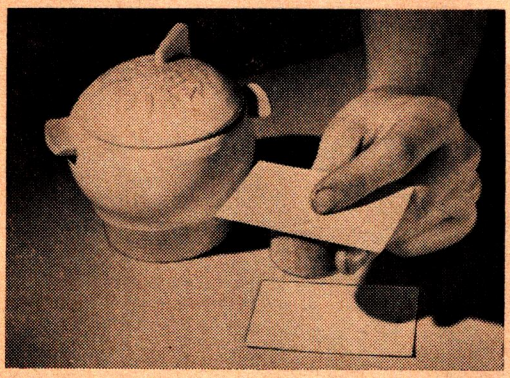


Pick up a match lengthwise, using two other matches as tongs. The two matches used for tongs may be touched only with the thumb and forefinger of one hand. Lay the two matches parallel on the table and grasp them at their unheaded ends. Now squeeze these ends tightly together, so that the matches open out like tongs. Once you get the knack, you will be able to spread them wide enough to pick up the third match without difficulty.

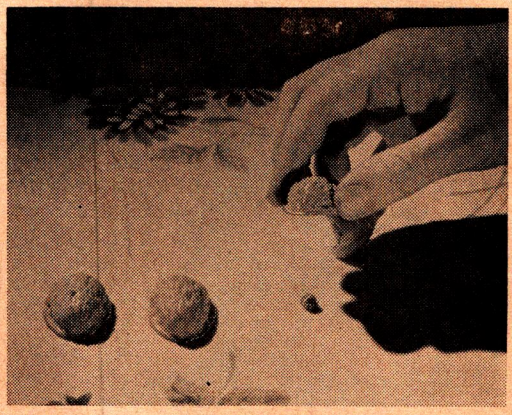
Produce a coin from an empty matchbox. First show the box almost completely open. Then close it and reopen it. The coin that appears was first held between the cover and the back edge of the drawer. It falls in when the box is closed.



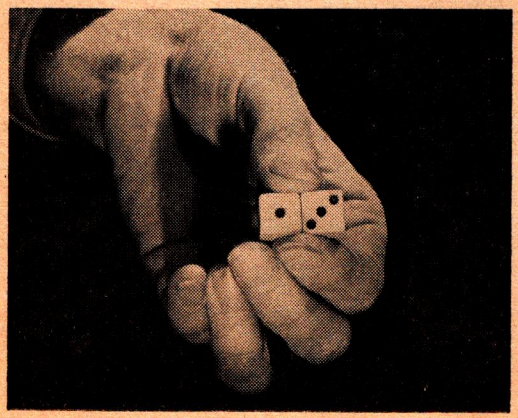
Make a cigarette follow your lead. A cigarette, balanced on the edge of a table, dips and rises in accord with another moved up and down beneath it. The power of the lower cigarette comes from a stream of your breath, blown secretly on the upper one as you bend over it.



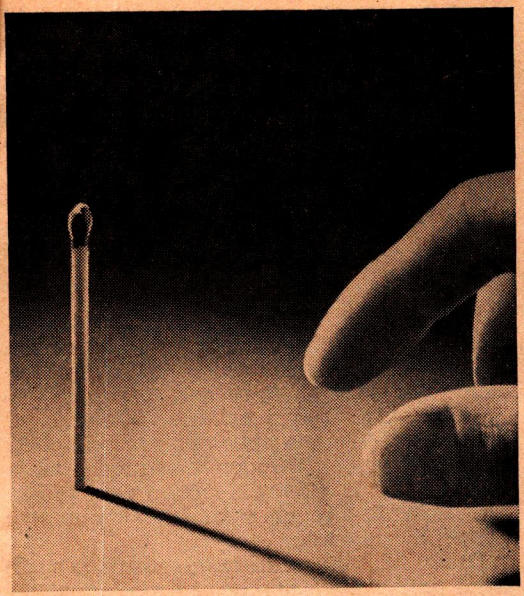
Make sugar in a napkin ring disappear and reappear. Place the ring on a calling card, put a little sugar in it, and cover the ring with another card. Lift the ring and the top card, and no sugar is to be seen. Replace them, pick up both cards with the ring, and return them to the table *turned upside down.* Again lift the ring and top card: the sugar has reappeared. Unseen is a paper disk pasted over one end of the ring.



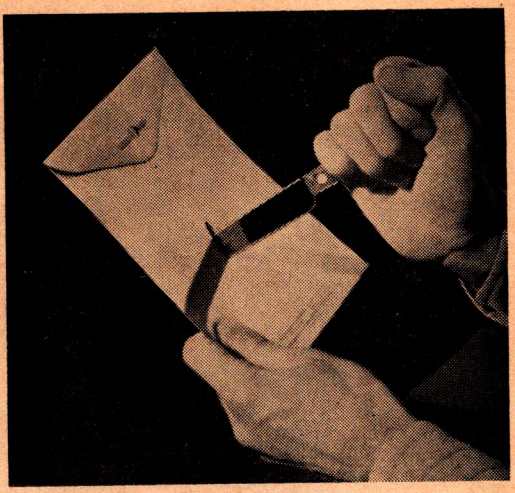
Which shell has the pea? Put a pea under the middle one of three half walnut shells on a covered table and move each shell about 3 in. to the left. You can then—if you have been skillful enough to extract the pea unnoticed and hide it between your thumb and middle finger—make the pea appear under any shell that is named. The pea should be cut out of a green eraser or other soft rubber. In sliding the middle shell, squeeze the pea out under the back. To make it reappear, drop it as you pick up the chosen shell.



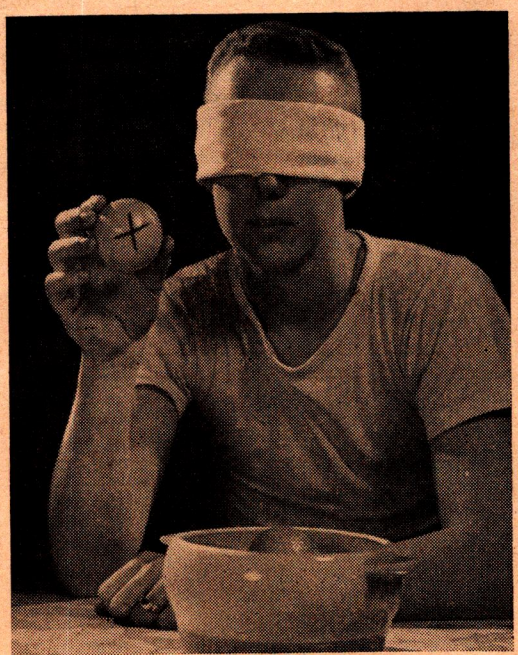
Make the three and the one change places. Hold the dice as shown and show them to the audience. Bring your other hand toward the dice and give them a gentle stroke with the index finger. When the finger has been removed, the dots have changed places. The change is easy if you have made sure that the reverse arrangement of the three and the one are on the faces of the dice adjacent to the faces first displayed, and are hidden by the thumb. Concealed by the movement of the free hand toward the dice, they are given the necessary quarter turn by moving the thumb slightly forward and the finger slightly back, thus substituting the new faces.



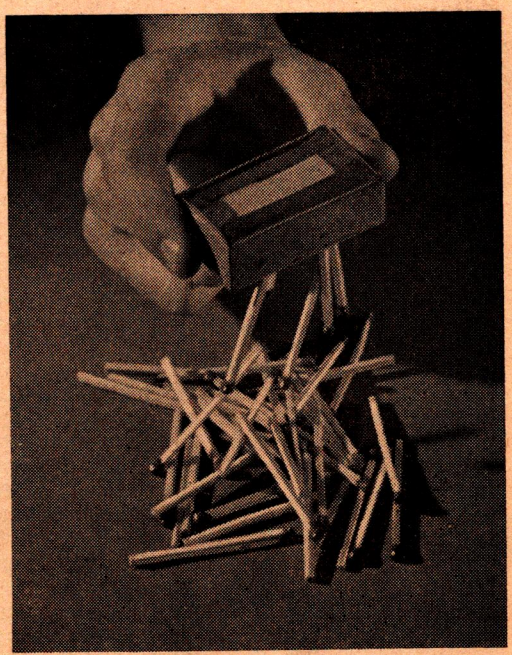
Stand a kitchen match on end. Use a large wooden match and a plastic or wood top table. Secretly wet the tip of one of your fingers with saliva. Touch the end of the match to this wet spot just before you try to stand it up. If you then press the match down carefully and firmly on the table, the saliva will act as an adhesive and hold the match in place.



Cut an envelope without cutting its contents. A sheet of paper just a little smaller than the envelope is inserted in a large envelope that has a flap at one end. The performer stabs completely through the middle of the envelope with a pointed knife. After the knife is withdrawn, the paper is pulled out, unfolded and whole. A straight slit, just a little higher than the point where the knife enters, has previously been cut across the side of the envelope which faces away from the audience. Instead of being pushed down into the envelope, the lower edge of the paper is passed out through the slit.



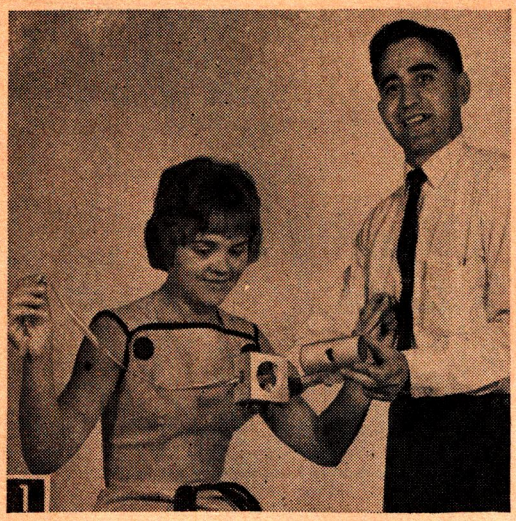
Blindfolded, pick a marked orange from among a half dozen. Mark an X with crayon on an orange which your friends have selected, being careful to give it a good pinching, as well. The extra softness of that orange will make it easy to pick out by feel.



Make matches stay put, then fall at your command. Invert the matchbox and remove the cover. The matches do not fall until you squeeze the ends of the box—thus releasing a broken match wedged crosswise in it.

Block, Frame, and Ribbon Trick

★ Mystery of the unthreaded cylinder will baffle audience



The cylinder block was threaded on the ribbon inside the wooden cube. How did the magician get it out?

WHEN you fit a cylindrical wooden block into a thick wooden frame and thread both on a ribbon, you don't expect to see that block free of either ribbon or frame as long as the ribbon ends are tightly held.

But magic makes a difference. While one or two persons hold the ribbon and the block dangles inside the frame, the magician gives the block a tug and away it comes, as in Fig. 1, leaving the empty frame still strung on the ribbon.

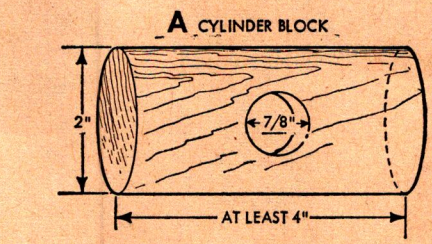
Let your audience examine everything concerned with this mystery before and after performing it. The trick itself is easy; but the construction of the block and frame can be complicated unless you have the right material and tools. For the cylinder block, an old croquet mallet head of about 2-in. dia. and at least 4 in. long will do well. Drill a ⅞-in. hole through the center as in Fig. 2A.

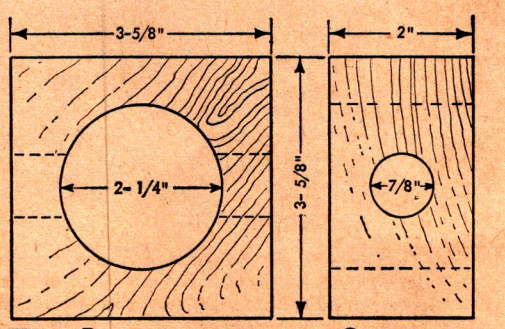
Chief Problem is to bore a 2¼-in. dia. hole through the wood frame (Fig. 2B), itself 2 in. or more thick. If you have a piece of 4 x 4 post in your scrap box (actually 3⅝-in. square), merely cut off a 2-in. piece for the frame. The hole should be at least ⅛ in. greater in diameter than your cylinder to permit free ribbon movement.

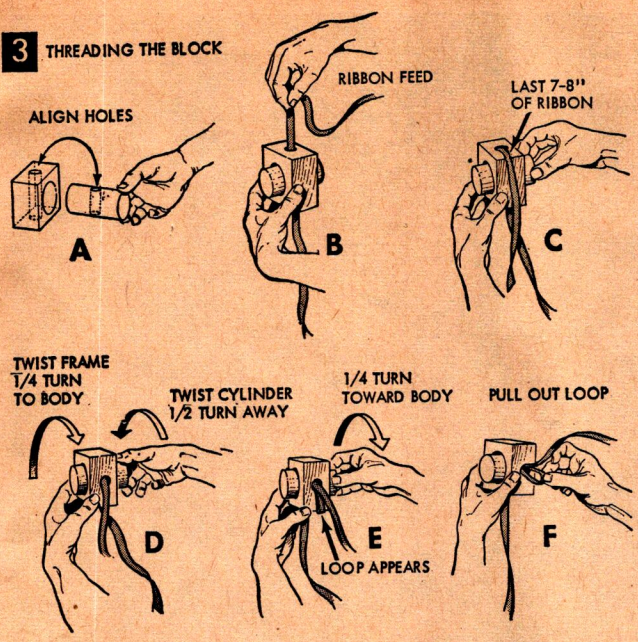
If you do not have a large enough auger bit or circle cutter, cut the frame in half across the thickness. You can then saw out semi-circles on each piece so that they form the required hole when rejoined. Glue the two segments tightly together. Drill a ⅞-in. hole on each side of the frame as in Fig. 2C. After smoothing off all rough edges with fine sandpaper, paint frame and block in contrasting colors.

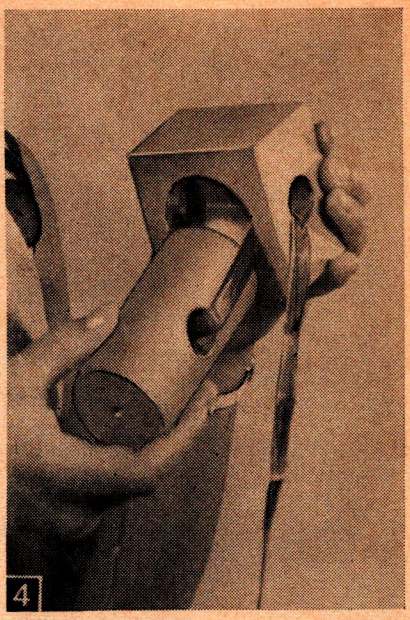
In presenting the trick, use a ½-in. ribbon at least 5 ft. long. Hold the frame in your left hand with ribbon hole up and large hole facing the sides. Insert cylinder in the large hole (Fig. 3A) until ribbon holes are aligned, then feed ribbon through these holes as in Figs. 3B and 4, and cross-section view in Fig. 5A. Poke it through with your wand or a pencil, if necessary.

Draw the ribbon through with the right hand until only 7 or 8 in. still project at the top. Bring that end toward you and let it dangle in front of the frame (Fig. 3C). Now grip the protruding end of the cylinder block with the right hand (thumb below and fingers above as in Fig. 3D), and lift the apparatus as though you intended to show it more plainly. Twist the frame a quarter-turn toward your body with your left hand and at the same time twist the block a half-turn away with your right (Figs. 3D, 5B, and C). This brings your left thumb toward you and your right thumb up. Immediately, twist block a quarter-turn back so both thumbs are toward you.









Block purposely drawn down from frame to show course of ribbon. Normally, ribbon would be tight and block inside frame.

The first action causes the ribbon to run around between block and frame and the reverse quarter-turn forces a little loop out through the ribbon hole which now faces you (Figs. 3E and 5D). Dangling end of the ribbon will partly hide the loop.

Now Your Audience Expects you to pull out the short end to bring the block and frame to exact center of the ribbon. You appear to do this but, actually, pull the protruding loop as in Figs. 3F and 5E. This hauls the short end around between block and frame, then out the ribbon hole again. Such action looks natural, yet when the ends are evened the ribbon actually goes around the cylinder block instead of through it.

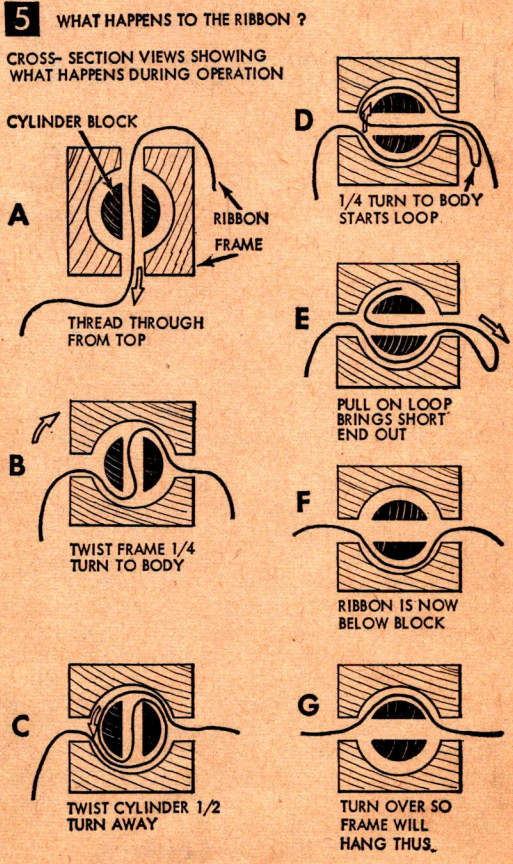
Now invert the block and frame so ribbon will rest around top of block instead of below (Fig. 5F and G). Invite two persons to hold the ribbon ends, with the frame and block swinging in the center.

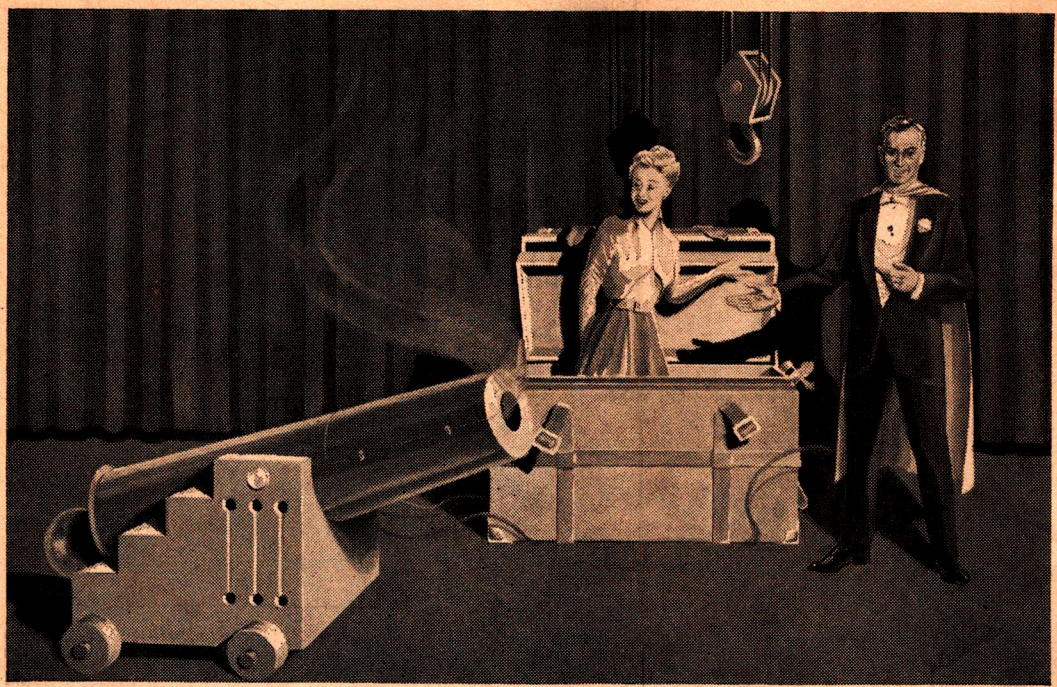
In mysterious cloak-and-dagger style, you can cover the frame with a cloth, reach in underneath it and bring out the block. Or, and perhaps even more puzzling to your audience, you can openly pull the block out of the frame.

In either case, you can hand everything to the audience for examination. No one will find any gimmicks, because there are none.

MATERIALS LIST—BLOCK, FRAME, AND RIBBON

No. Req.	Size and Description
1 pc.	2" dia. x 4" or longer wood (cylindrical block) (old croquet mallet head 4 to 6" long will be adequate)
1	2 x 3⅝ x 3⅝" wood (frame)
1 pc.	½" x 5' ribbon, or longer (to thread block and cylinder)
Misc.	glue, two contrasting paints





It's the same girl who was in the cannon a few minutes before—she returns objects borrowed from people in the audience to prove it.

The Cannon and Trunks

★ **How does the girl get out of the cannon on stage and into the locked trunks hung near the theater roof?—Secrets of Goldin's double-barreled mystery revealed**

SHOOTING a woman from a huge cannon into the innermost of three nested trunks has long rated as one of the most spectacular of all stage illusions.

The girl is loaded into the cannon, which is pointed at a trunk hanging from the dome of the theater. After a huge puff of smoke and flame, the gun is wheeled away while the trunk is brought down by a rope and trolley, always within full sight of the audience.

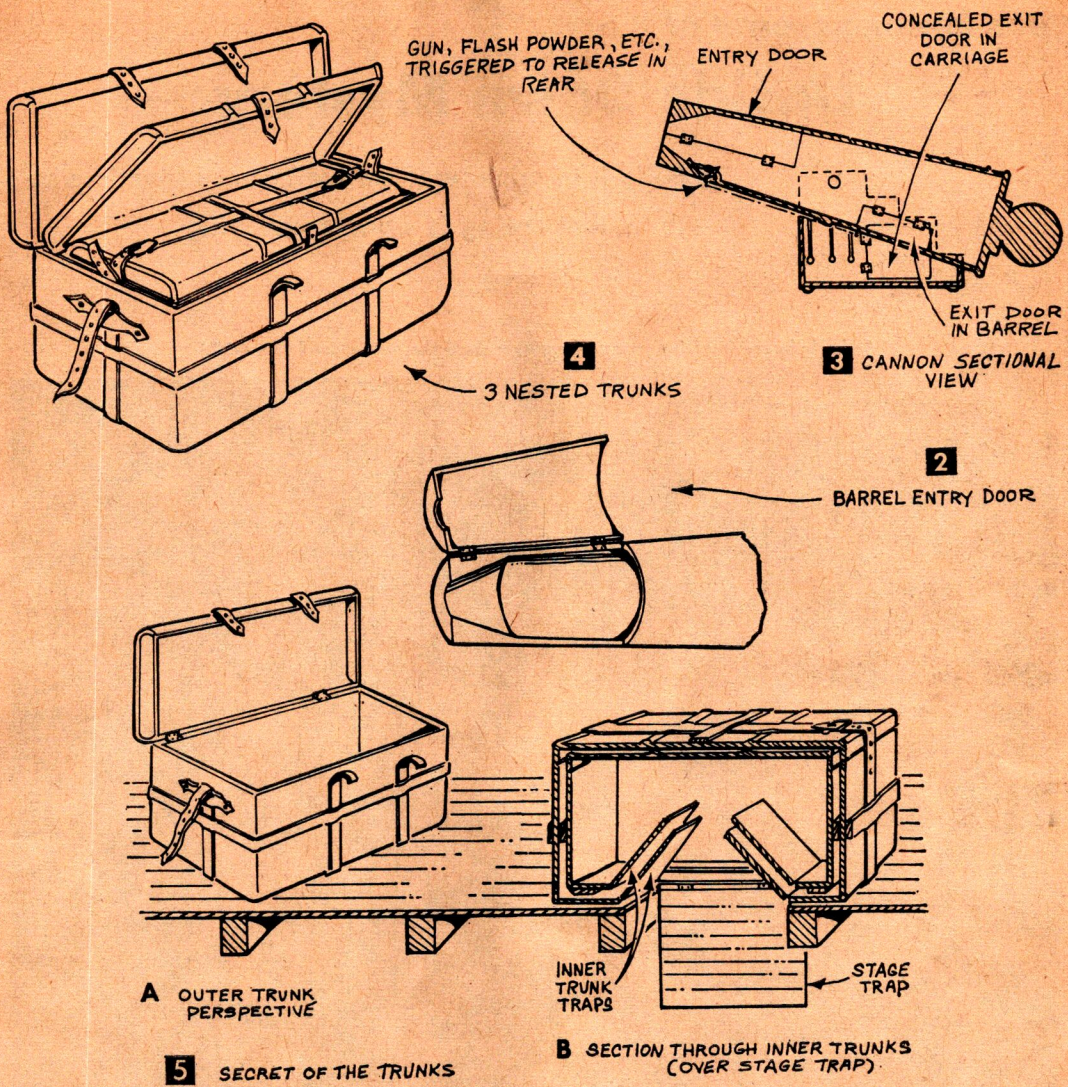
On stage the trunk is opened and another trunk taken out, and still another. From the third springs the missing girl as in Fig. 1. As proof she is the same girl, she carries objects borrowed from the audience, showing them when she enters the cannon and returning them when she emerges from the trunk.

This illusion was patented by the famous magician, Horace Goldin, both in the United States and England. He treated the Cannon Vanish (Fig. 3) and Nested Trunk Appearance (Fig. 4) separately, as each is substantially an individual illusion.

Once Loaded into the Cannon through a door near the muzzle (Fig. 2), the girl can open another door in the bottom of the barrel (Fig. 3), which is concealed from the audience by the gun carriage, and leave through a trap in the stage floor. In another method, the cannon is turned sideways so that the girl can leave through concealed side doors in the back of the barrel and the gun carriage to reach the stage trap. Two assistants stand directly behind the gun, ostensibly to hold it steady and move it as ordered, but actually they make it easier for the girl to get out.

Now the magician orders the empty gun turned completely around so the audience can see it from all sides, aims it at the trunks and fires. As the echoes of the loud report die away and the smoke from flash powder billows up, the trunks are already being brought down on the rope hoist.

In their patented form, the nested trunks consisted of a solid outer trunk (Fig. 5A) and two inner trunks, each with a pair of bottom traps which opened upward from the center toward the end walls as in Fig. 5B.



The instant the trunks arrive on stage, several husky assistants unbuckle the straps and open the outside trunk to reveal the second. After slipping bars through straps of the second trunk, they lift it out of the larger box with great effort and set it down on the floor directly over another stage trap.

Now it is simply a race against time. As the assistants are loosening the ties of the second trunk, and then the third, the girl who left the cannon via the other trap door is helped up from below through traps in the trunk bottoms to the inner trunk, which is just large enough for her to fit.

If she is a bit slow in assuming the position, the assistants will, by signal, experience more trouble in freeing the inner lid until the ready signal is given. But usually, the unlocking of the medium trunk allows enough time for her to take her place and let the traps fall back in normal position.

Improved Version. Since space is needed for the traps to operate, the trunks are apt to be overlarge and, therefore, heavy. In a more recent method of presentation, only the outermost trunk has a trap and it is suspended empty and alone from the theater dome.

Below stage, the girl is packed into the innermost of two solid trunks and both are pushed into the big trunk as soon as it is brought down to rest on the stage trap. After the inner trunks are lifted out, the bottom traps of the big trunk fall shut.

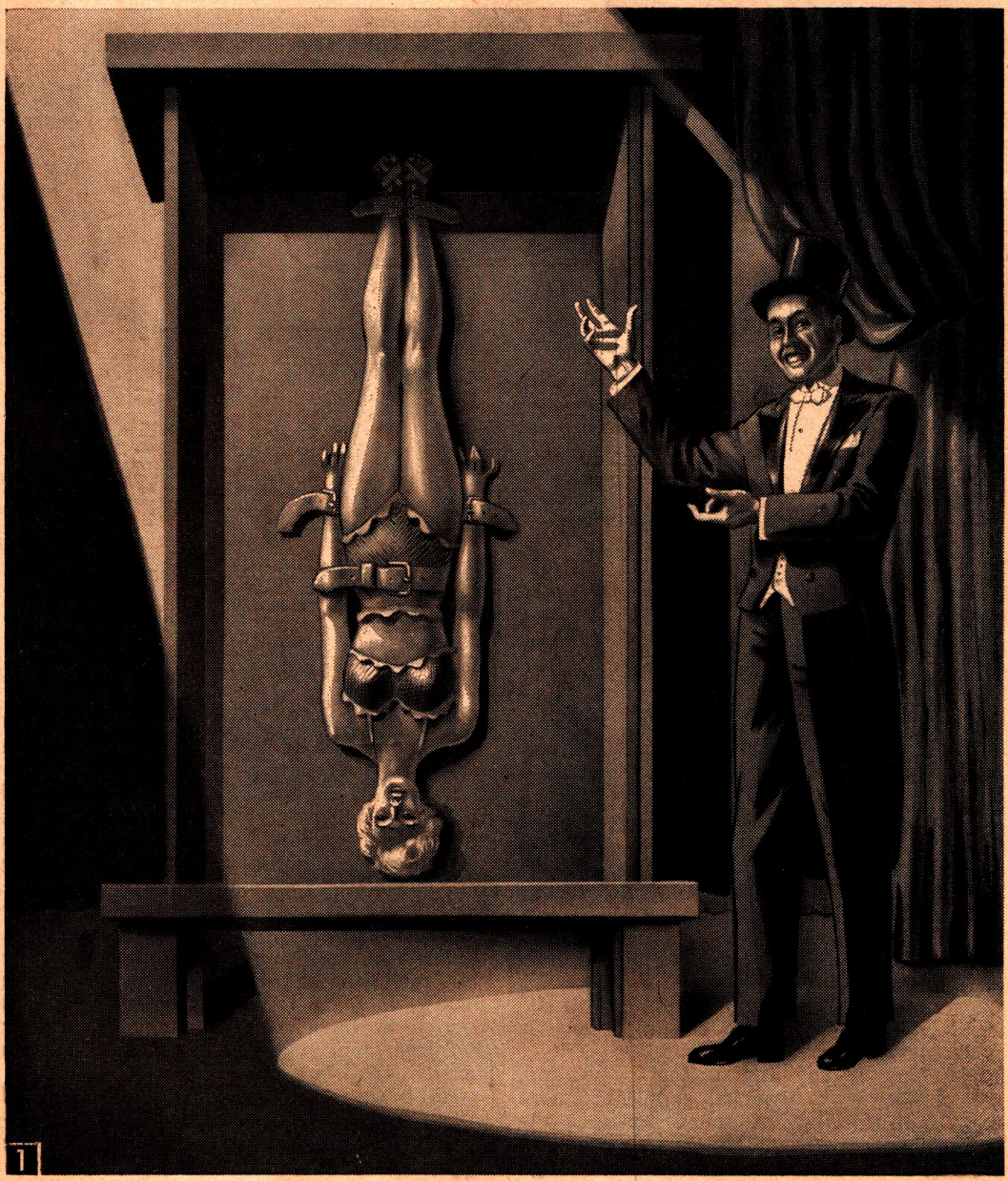
This stage illusion should not be confused with the circus stunt of firing human projectiles from a huge cannon into a net on the opposite side of the arena.

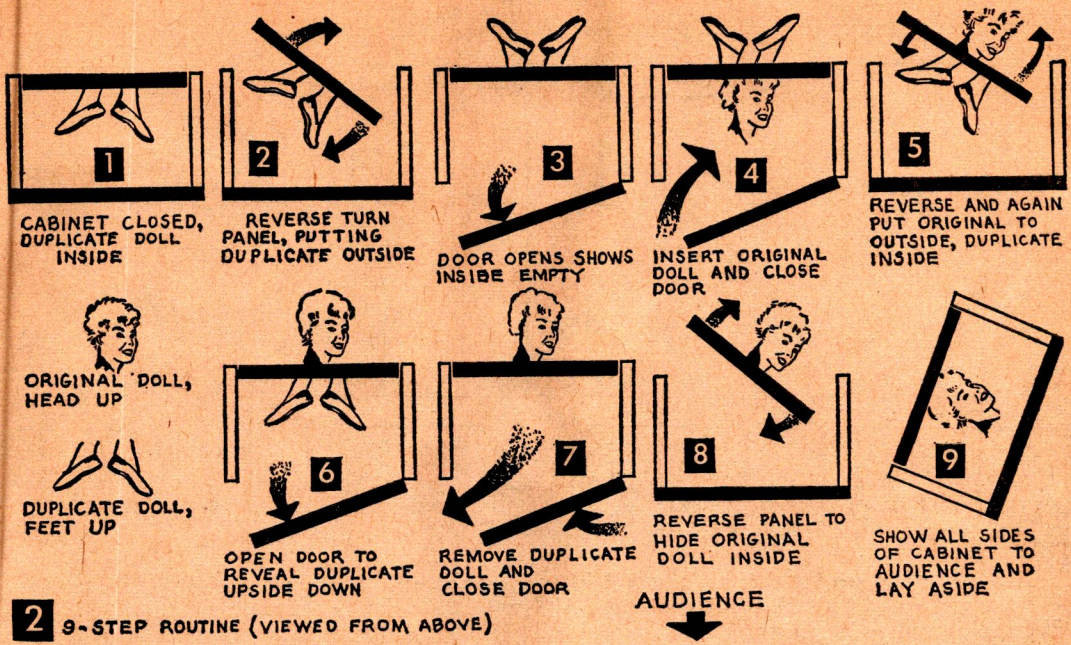
The ingenious secret of the

Upside Down Mystery

★ **Build it in miniature and baffle your friends who think that seeing is always believing**

Securely bound in such a narrow box, how could she turn around so quickly!





2 9-STEP ROUTINE (VIEWED FROM ABOVE)

SHOWN as a full-sized stage illusion by Thurston, and other famous magicians, the "Upside Down Mystery" left audiences in a bewildered state. It happened so fast, they couldn't quite believe they'd seen it, and the more they thought back, the more inexplicable it became.

This is the way it looks:

Two assistants wheel an upright cabinet on the stage and turn it all around. The cabinet is mounted on a platform, so people can see beneath it. A front door is opened, disclosing an interior approximately 5½ ft. high, 3 ft. wide, and 1½ ft. deep.

A girl is strapped to an upright board in the shallow cabinet, so that she faces the audience in a standing position with little room to spare. The wizard closes the door, recites weird words, and reopens it almost immediately. The result is remarkable indeed.

She's still tied to the board, but upside down, as in Fig. 1. In mere moments, she has turned a half somersault inside the cabinet, despite its cramped confines, and the straps that hold her tightly to the board.

The girl is removed from the cabinet, and released from the board. She stands up to take her bow while the cabinet is closed, wheeled around, and run off stage. By then, the audience begins to catch its breath. How —except by magic—this could be accomplished is a riddle in its own right. There is no way the board could have been swung about, so the girl just could not have turned upside down inside that cabinet. Yet how did she manage it?

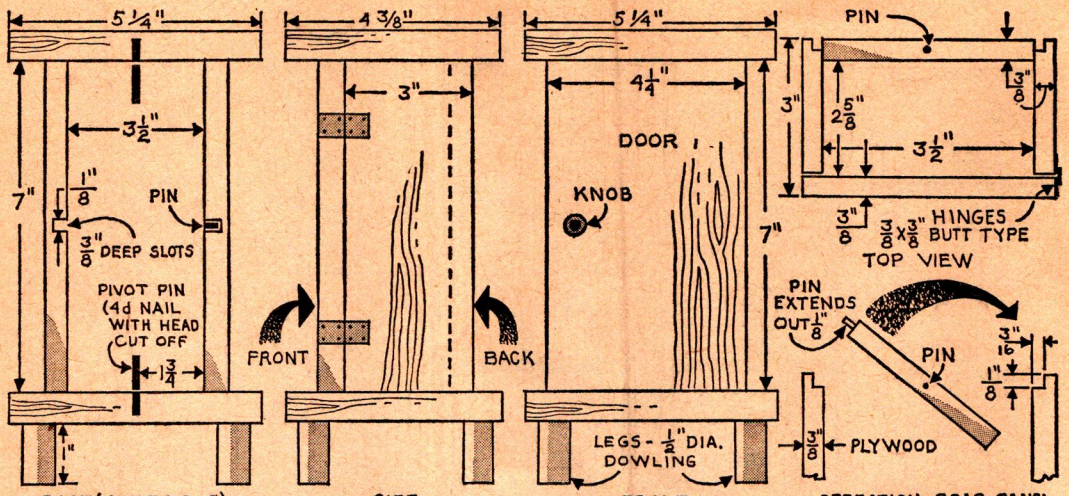
Topsy Turvy Twin. The answer is, she didn't. The girl who entered that cabinet never was upside down inside it. Her twin sister was.

The illusion (Fig. 2) requires two twins who look exactly alike. One is strapped to a board beforehand. The board is turned so she will be upside down, and then attached to the inside back wall of the cabinet. The door is closed, and the cabinet is wheeled on stage, turned around, and shown on all sides with its door to the front.

An assistant then swivels the back of the cabinet one-half turn like a revolving panel, which it is. That puts the upside-down girl outside of the cabinet. Meanwhile, the magician is introducing the original girl to the audience and having her strapped to a board. The door of the cabinet is opened and she is put in standing up.

The moment the door is closed, the rear panel is again given a half turn, putting the original girl out back and bringing her twin inside. The door is immediately opened and the girl is seen upside down, still strapped to what appears to be the same board. The twin is taken from the cabinet, the door is closed, and the panel is turned to bring the original girl inside. The cabinet is then turned around and rolled off stage.

Work It Yourself with Dolls. This is a neat feat, because everybody thinks of everything except the right solution; the fact that two girls are involved. It is also well adapted to miniature form, because the girls play no active part, hence with a working model, dolls can be used instead.



3 MINATURE CABINET DETAILS

You can make up the midget box quickly in your workshop as in Fig. 3 from a piece of 3/8-in. plywood as small as 12 x 14 in. and a short length of 1/2-in. square stop or 1/2-in. dia. doweling. The only unusual construction is the back, which is actually a door pivoting on two small steel pins.

Assemble the box parts with glue and 4*d* finishing or casing nails, but install the back pivot door before adding the top. An easy way to insert pins is to drive 4d nails in about 1 in. deep at center of top and bottom edges. Then cut off the heads with pliers or a hacksaw so that a trifle more than 3/16 in. of the nail protrudes from the bottom and a trifle less from the top.

Place the door in position on the base flush with the rear of the side walls. It should be just loose enough to swing on the pivot freely in and out of position against the sides. If too tight, sand one edge down a bit. Mark pin location on base, remove door and drill a hole 3/16 in. deep. Mark the corresponding location of the top and drill a similar hole. Now install door with pin in base hole, engage top on other pin and glue and nail top in place. The pivoting will be quieter and easier if the bottom pin is just long enough for the door to clear the base when being turned.

Limit Door to a Half Turn. Drive a third nail in one side edge of the pivot door as in Fig. 2 but cut off the head so that only 1/8 in. or so protrudes. At points where this pin touches each side, cut slots 1/8-in. wide and 3/16-in. deep. These will also line up the door with the sides to resemble a solid back.

Install the front door with small butt hinges and attach a knob. Since the slots in back and the side pins are exposed, it's a good idea to paint the entire cabinet exterior in a solid dark color to hide them.

Instead of using miniature boards to attach the dolls to the back panel, they can be hooked to ornamental strips of wood or metal. Another way is to cement a strong magnet to the back of each doll and have thin steel disks for strips in the center of the panel, appearing as part of the design. This is a sure and quick method—if you use lightweight dolls.

The midget box needs no rollers; you can pick it up and show it from all sides. In doing this, simply press a thumb on the side of the rear panel nearest the pin to keep panel firmly closed.

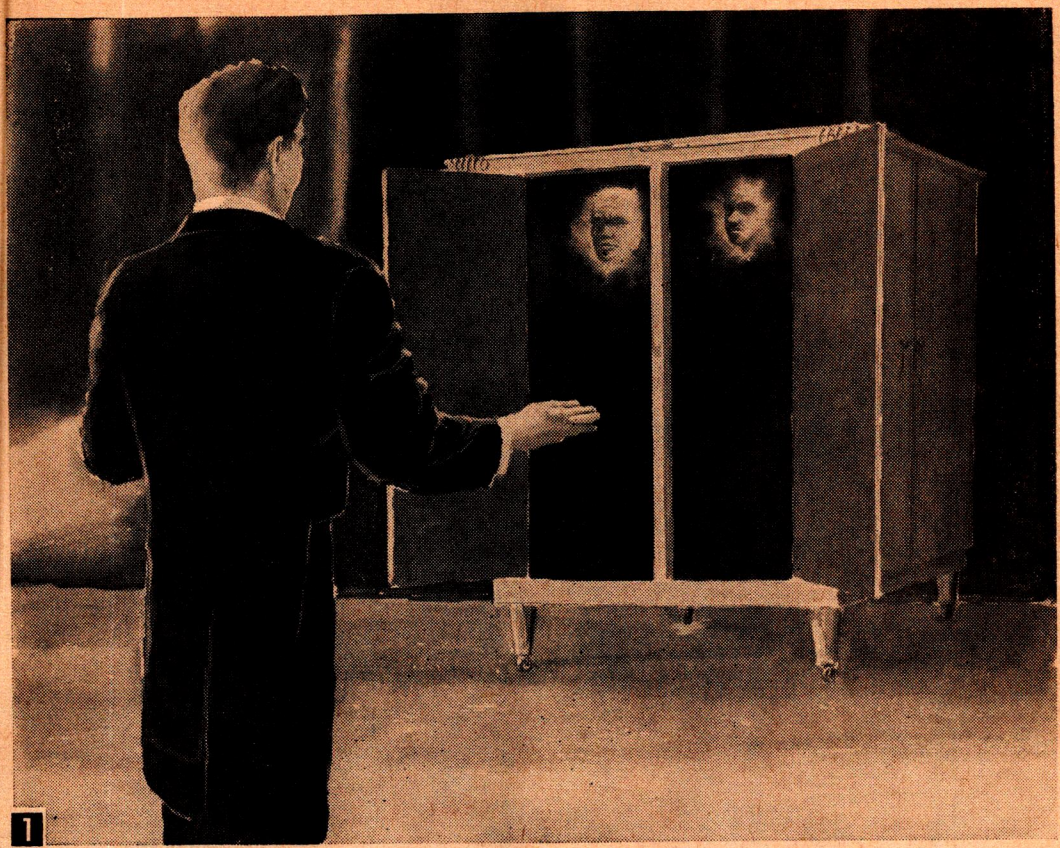
When going through the routine, your left hand operates the door and puts the doll in and out through the door. The right hand, resting on the cabinet top near the back, actuates the panel by extending fingers down in back. At each half turn, the fingers shift to the proper side to press the panel in place.

The position of the hand is natural, and the actions are completely covered. When the door is shut, the cabinet can be lifted occasionally, and replaced on the table, the right hand turning the panel during the process. That helps mask the action of the hand.

The projecting bottom and top will hide the doll when it is outside the cabinet. If the side angles are too sharp, decorate the cabinet with projecting ornamental strips, or "wings" extending out from the rear corners. Another handy decoration is a scroll or molding on the top of the cabinet, either at the front, or crosswise at the center. This, if used, helps hide the action of the right hand.

MATERIALS LIST—MINIATURE UPSIDE DOWN CABINET

No. Req.	Size and Description
1 pc.	3/8 x 12 x 15" plywood (sides, top, base, doors)
1 pc.	1/2" dia. x 6" doweling (legs)
1 pr.	3/8 x 3/8" butt hinges (front door)
2	identical lightweight dolls (no more than 6 1/2" tall)
2	identical boards with straps or other restraining devices (see text)
Misc.	small box-type door knob, 4d finishing nails, glue, dark paint



1

Phantom faces are but a mild sample of the greetings you face any time you watch the spirit cabinet, no matter which way you look. Three sides have curtained doors like these while the fourth is enclosed by sliding, roll-up curtains.

How the spooks move in and out of

Thurston's Spirit Cabinet

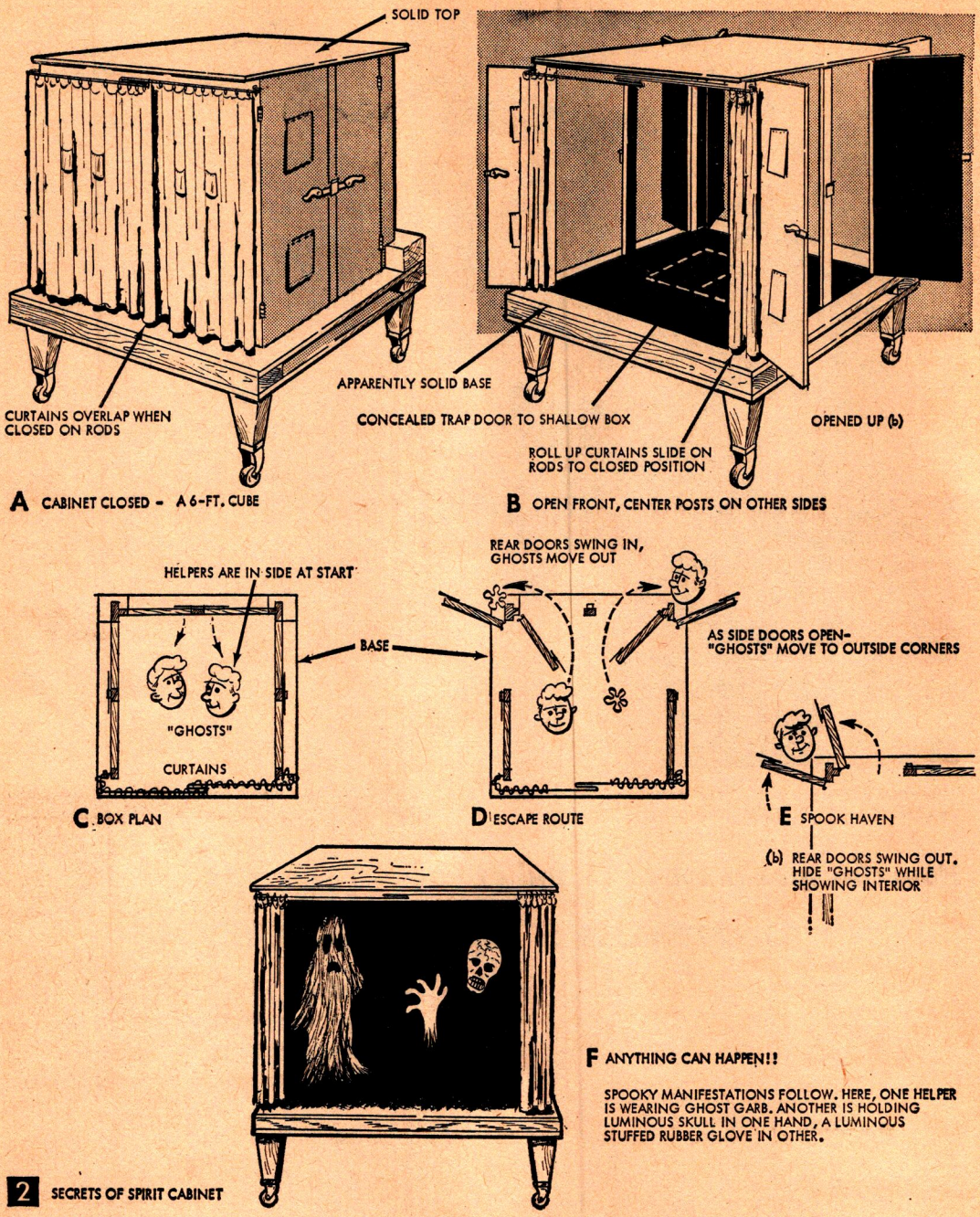
★ **Bells clang, skulls grin, and many other things happen in the big, empty box—but the noisy ghosts are never caught**

MILLIONS of persons have marveled at Thurston's Spirit Cabinet, and many were gullible enough to believe that real ghosts flitted in and out of its darkness. From the things that can happen inside such a cabinet, it is not surprising that they should get such ideas. From start to finish, the act is baffling and uncanny.

The cabinet is a large one, about 6 ft. square, and about the same height. It is mounted on four legs with casters so that it may be rolled about to show the entire outside surface. There are two curtains at the front, which slide open on a rod.

Both sides of the cabinet consist of a pair of doors, one hinged to an upright near the front corner, the other to an upright near the back corner. These open outwardly from a central post, half-way along the side of the cabinet as in Fig. 1.

At the back, there are two corresponding rear doors, hinged near the rear corners of the cabinet, and with a center post. After the cabinet has been wheeled around in closed condition (Fig. 2A), the magician draws the curtains wide, and opens all six doors outward. This lets people look through from every angle, the cabinet being nothing more than an empty framework (Fig. 2B) with solid top and bottom, though neither of those



can be thick enough to hide a person.

Spooks Treat 'em Rough. A chair is placed in the cabinet, and some bells and tambourines are laid on it. The doors are closed, the curtains are drawn shut, and immediately the bells and tambourines come flying out through flap-covered holes in the curtain. The curtains are yanked open and the chair comes bouncing out, yet the cabinet is empty.

People from the audience now enter the cabinet, only to be thrust out by an invisible force, much to the amusement of the rest of the audience. One man is put inside, and told to push his hands through the curtain holes. While his hands are held by someone outside, he is attacked by "spooks" inside. When he finally is freed and staggers from the cabinet his coat has been turned inside out by the

spooks, and he is wearing it that way.

The curtains are left open, and weird manifestations follow. Glowing ghosts appear and vanish. Grinning skulls float about inside the cabinet and disappear. A ghostly guitar appears and strums real music. The curtains are closed again, and more objects are thrown out, either through the curtain holes or flap-covered holes in the side doors toward the front.

Finally, the curtains and doors are hurriedly opened by the magician and his assistants in a frantic effort to catch the ghosts. But the cabinet is just as empty as it was at the start, and all the while people have seen above and below it.

Rear Doors Swing Two Ways. The secret depends mainly on the two rear doors, which hinge both ways, inward as well as outward. Two hidden helpers are inside the cabinet when it is wheeled around in closed condition (Fig. 2C). When the front is toward the audience, the side doors toward the back are opened by two assistants standing on the stage, so that each door extends out at a sharp angle.

The hidden helpers meanwhile swing the rear doors inward as in Fig. 2D, and step around them, to take positions behind the side doors that are already open. They manage this by standing on small pedestals that project from the corners of the platform on which the cabinet is mounted. They hold these positions by gripping straps attached to the upper portions of the rear corners of the cabinet.

They also draw the rear doors back to normal so that the assistants can walk around outside the cabinet to open the other side doors, curtains, and finally, the rear doors, in an outward direction. The helpers are now hidden between the angles of the jutting doors as in Fig. 2E. When the doors and curtains are closed again, the whole process is reversed, bringing the helpers back into the cabinet where they are to play the part of ghosts.

The inside of the doors and the floor, ceiling, and all other interior parts of the cabinet are painted a dead black. Both helpers are dressed in black, even to their hoods. Stage lights are so arranged that they shine only a short way into the open front, so that the helpers cannot be seen moving about inside, even when the curtains are open. Chairs and other articles put into the cabinet are purposely painted white, to be plainly visible.

The helpers throw tambourines and bells out through the curtains, and finally the chair, when the curtains are opened. They can wave bells and tambourines in mid-air while the curtains are open. Anyone who enters the cabinet can be pushed out by the invisible helpers. The man who sticks his hands out is a stooge from the audience. He is wearing two coats, the inner one turned inside out. The "ghosts" pull the outer coat from his arms and body, and he stumbles into sight wearing only the inner coat.

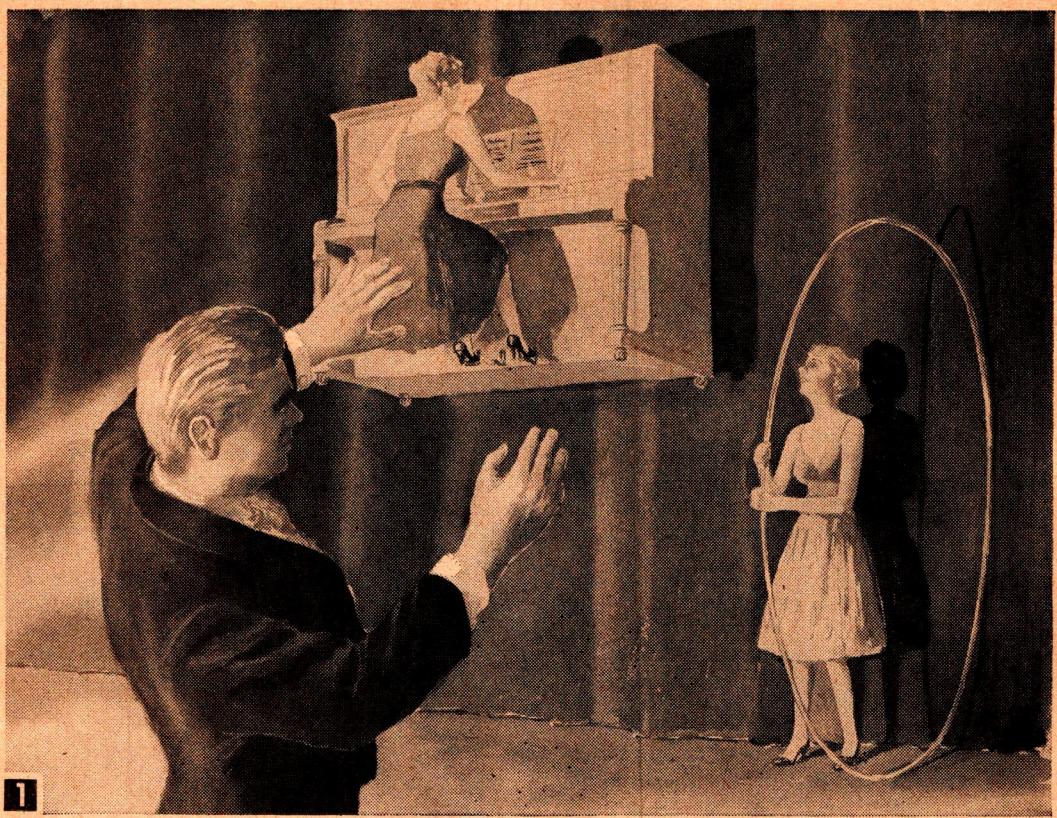
Ghostly Gauze. To become glowing ghosts, the helpers put on white gauze costumes and masks. These can be coated with luminous paint. They appear to grow and diminish, as they are put on and taken off. The skulls and the guitar that float about are also luminous and are waved about in the black-gloved hands of the unseen helpers.

These and any other required items, including the stooge's coat, are concealed in a shallow box in the center of the cabinet floor, which is of double thickness. This has a hinged trap-door, so the helpers can bring out the "props" as needed, and pack them away later.

At the finish, the front curtains are closed long enough for the hidden helpers to get out through the rear doors while the assistants begin opening the side doors as they did before. All doors and curtains are then opened, showing the cabinet empty. The cabinet is closed, and the ghostly helpers get inside and set the back doors in place again, before the cabinet is wheeled off.

Drop the Coin

• Here is a puzzler with a very simple solution—if one happens to think of it. Place a square of paper over the mouth of a tumbler and lay a coin on its center. Now challenge anyone to get the coin into the glass—without touching either paper or coin. When all give up, light one corner of the paper with a match or cigarette lighter and let the flame do the work.



1

At the magician's command, the piano starts to rise straight up in the air, the girl rising with it.

Behind the scenes with

The Floating Piano

★ **By "hypnotic power," the piano rises, then revolves in air, as the musician plays on**

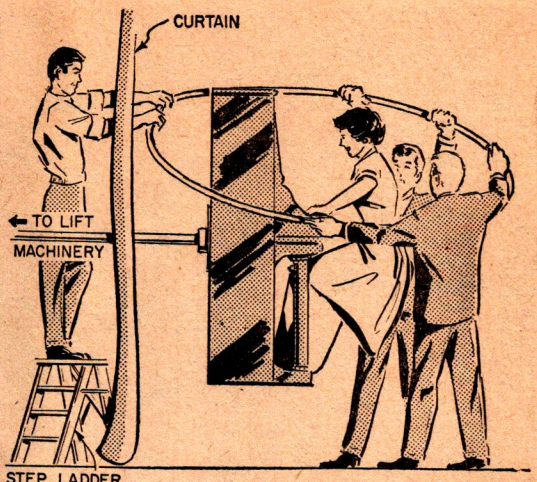
FOR many years, the floating piano was a sensation of the American vaudeville stage. The act opens with a girl seated at an upright piano, with her back toward the audience. She plays a brief number, and takes a bow. The magician pretends to hypnotize the girl, and she plays more rapidly. At the magician's command, the piano starts to rise straight up in the air, the girl rising with it, still playing (Fig. 1).

As the piano rises, the magician takes away the bench, which is still on the stage, and the girl appears to be seated in mid-air. When the piano has risen about 6 ft., it stops; while the girl continues playing, the magician makes more hypnotic passes. The piano responds by rotating in the air, like a wheel, the pianist rotating with it.

When the piano stops, the magician and an assistant take a large metal hoop and lift it over the top of the floating piano and the girl (Fig. 2). They bring the hoop downward and let it fall to the stage with a clang. This is done to prove that girl and piano are really floating. Then the piano descends gradually to the floor, the girl stops playing, and the act is over.

This illusion is performed directly in front of a curtain, which hides a powerful elevator device that raises the piano by means of a metal rod extending through an opening in the curtain (Fig. 3A). The piano has a metal casting attached to the back that receives the rod. At the front, a metal bar extends out-

2 PASSING BIG HOOP OVER PIANO



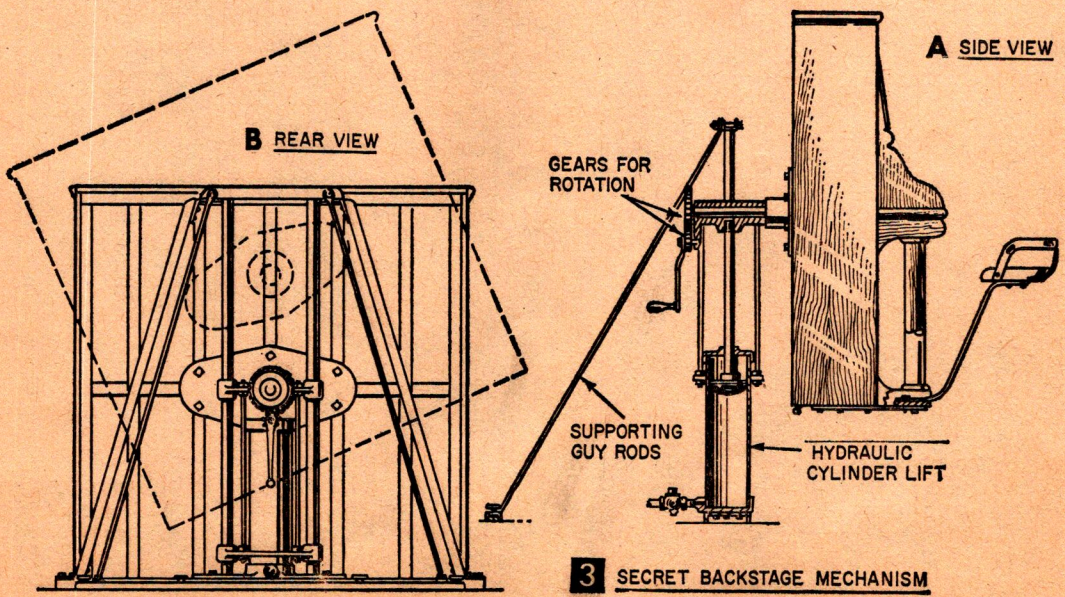
4 HIDDEN ASSISTANT SEPARATES HOOP, REJOINS IT BELOW ROD

ward to a small seat which supports the girl; seat and bar are hidden by the girl's skirt.

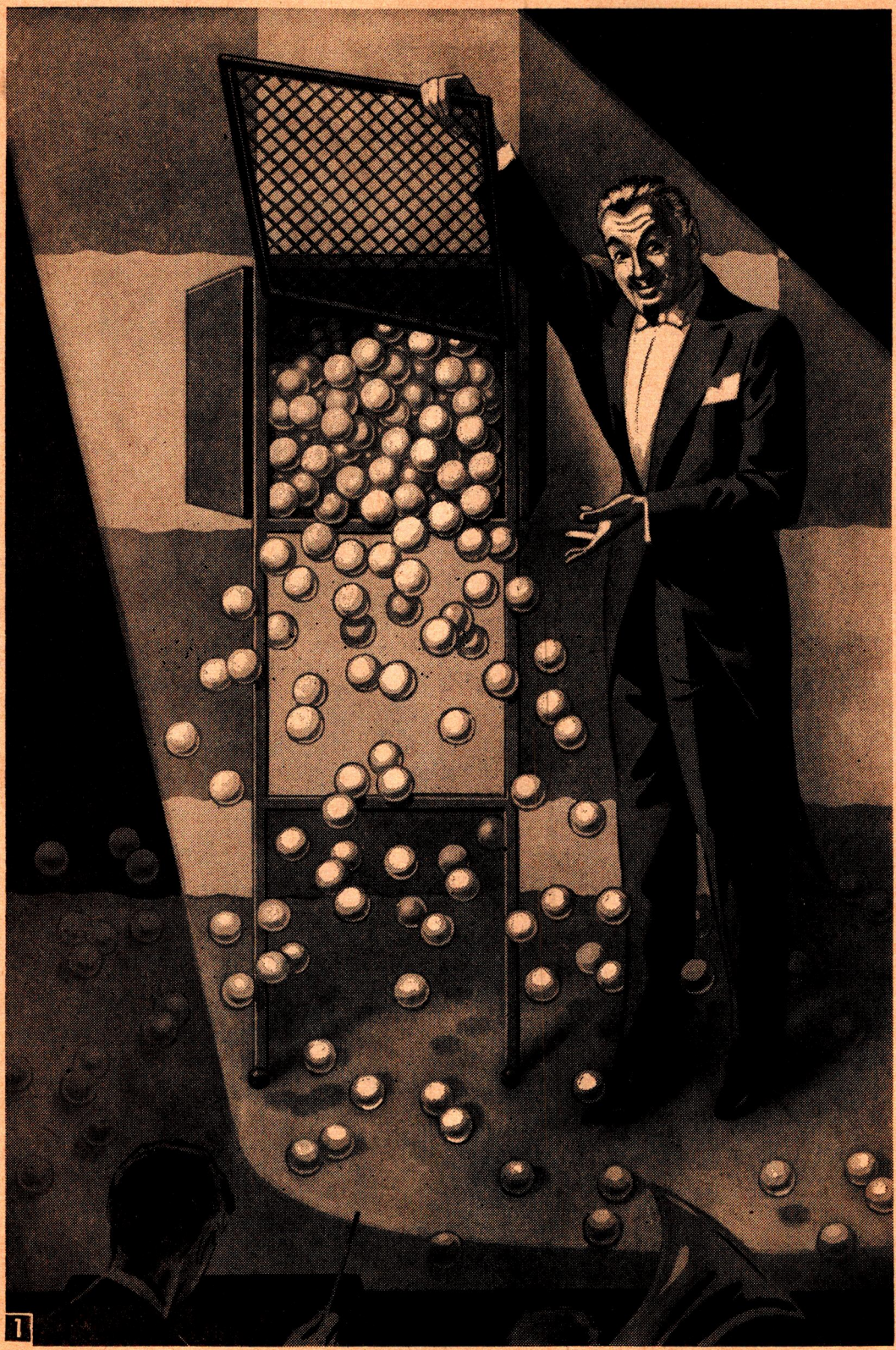
There is a gear wheel at the end of the shaft, operated by a pinion mounted on a bearing box, and provided with a crank (Fig. 3B). This device is used for rotating the piano after it is in mid-air. The girl is strapped to the seat and is carried around with it.

The lifting device and the crank are operated by an assistant behind the curtain. He also helps when the big hoop is passed over the piano and girl. The hoop has a gap in it, which is joined by a sliding sleeve of metal tubing or similar device. This part of the hoop is brought down in back of the piano: the assistant reaches through the curtain (Fig. 4), pulls the hoop apart, guides it down past the rod, and presses the joint back together, so that the hoop will again be shown intact after it clatters to the floor.

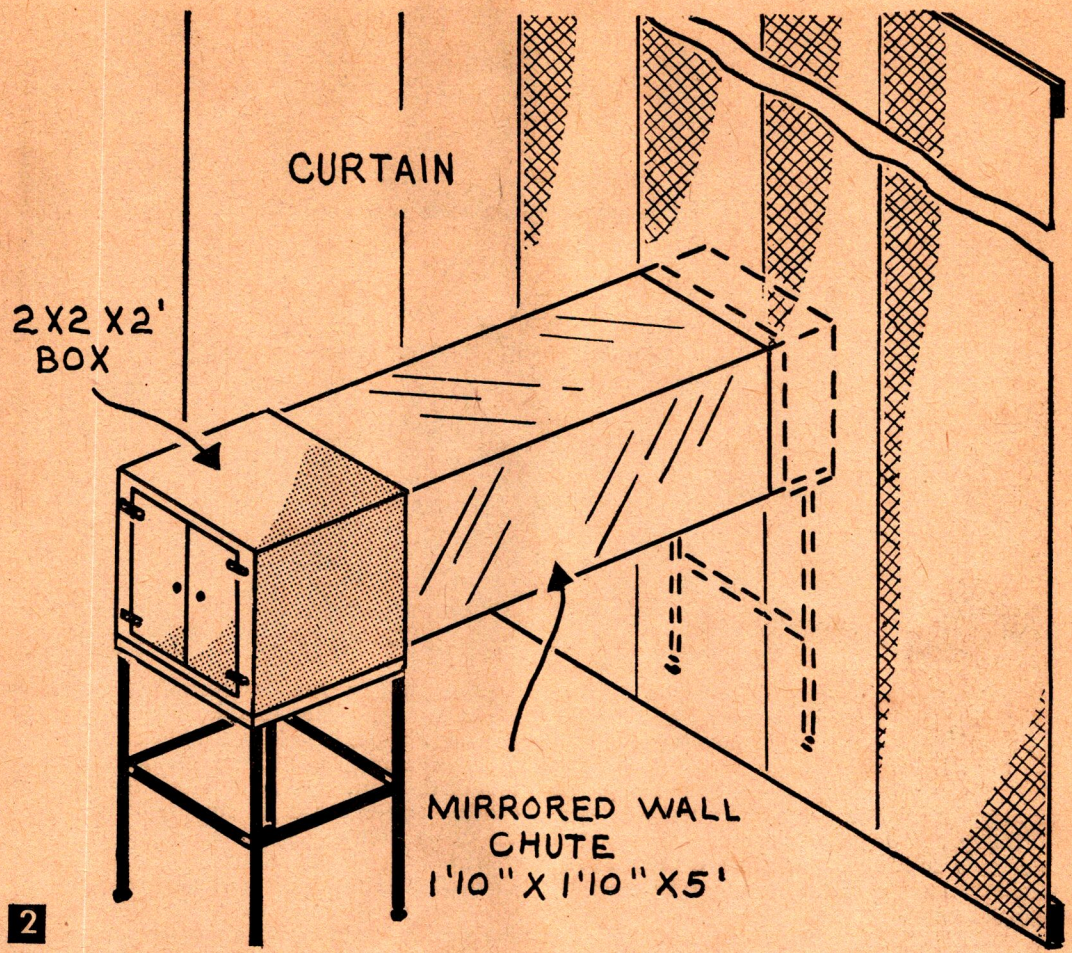
To make the illusion appear all the more remarkable, some magicians placed an elaborate bench directly under the seat. Designed in the same style as the piano, it had a high back rest and space between the legs was enclosed so the girl could take her bows without danger of disclosing the seat. She could also attach or detach the straps without detection. When she rose with the piano, leaving the bench behind, neither seat back nor support could be seen. They were lined with the same material as that used for her dress.



3 SECRET BACKSTAGE MECHANISM



Hundreds of tennis balls pour out and bounce all over the stage.



2

It doesn't cost $1,000,000 to build

The Million Dollar Mystery

★ Amazingly different things pour out of the square box alone on stage every time its doors are opened

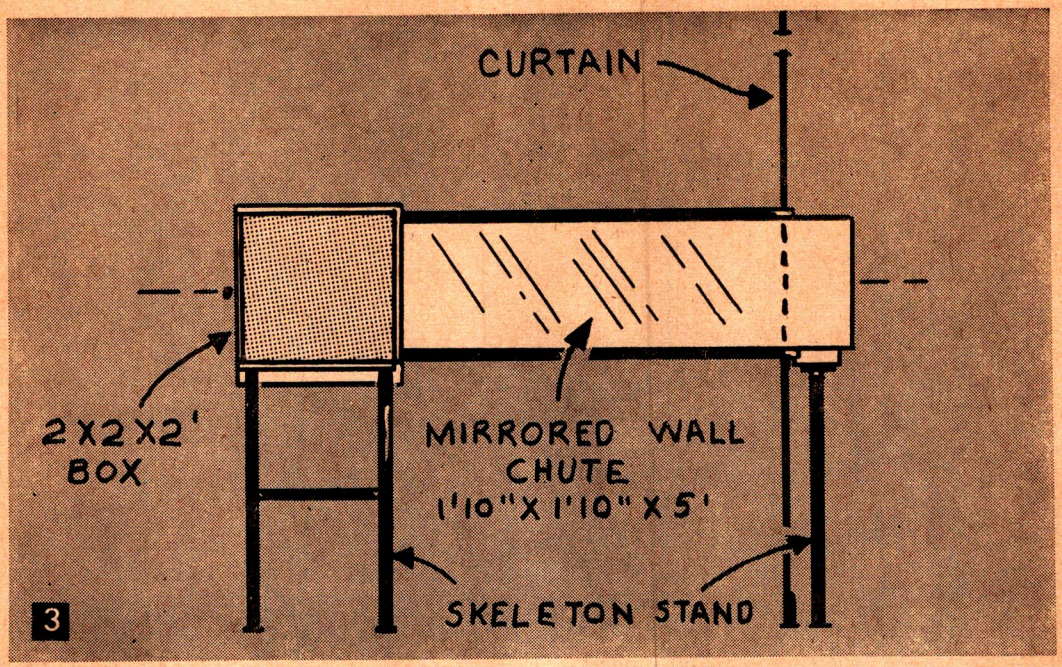
THIS device, once the sensation of the London vaudeville stage, is like the answer to a magician's dream. With it, all sorts of productions, transformations, and vanishes are possible.

The Mystery is centered in a box or cabinet 2 ft. square, mounted on a straight-legged skeleton stand about 4 ft. high, so that everyone can see beneath it. It is set some 5 ft. in front of a curtain, allowing a view behind it from every angle.

This means that the entire audience is convinced nothing can enter or leave the cabinet, either from above, below, or through the back. The box has two doors in front, and these are opened at the start. From then on, the incredible happens.

From Rabbit to a Lively "Corpse." The doors are closed, then reopened, and a large rabbit is found within the box. Next time, half a dozen pigeons fly out. A large pail is shown empty and placed inside the box. The doors are closed, and reopened a few moments later; the pail is full of water, which is emptied into a tub. Replaced in the box, the pail again fills itself in a few seconds. This may be repeated, time after time.

Now comes a visible production. Instead of closing the doors, the magician covers the front of the box with a screen, or mesh. Im-



mediately, something white appears behind the mesh, and when it is taken away hundreds of tennis balls come pouring out and bounce all over the stage (Fig. 1). When they are gathered up, there are enough of them to fill the box three or four times over.

Finally, the doors are closed and reopened to show a solid box within the cabinet itself. When drawn out, this is shown to be a coffin-shaped box which, placed on end, turns out to be as tall as the cabinet and its stand together. The audience supposes that the upright casket is collapsible until the magician opens it, and a living girl steps out!

A Square-Walled Invisible Chute is the secret of the illusion that runs from the cabinet through an opening in the backdrop to a hidden support beyond (Fig. 2). The back of the cabinet hinges upward into the chute, and can be lifted by engaging a ring handle with a long hooked rod as in Fig. 3. Assistants behind the scenes can push anything through to the cabinet and draw anything out with the same rod.

The filling of the pail simply involves pulling the empty one back through the chute and pushing forward a full pail in its place.

With the tennis balls, the mesh hides the lifting of the hinged back. Enough balls are poured in to fill the cabinet and the chute as well; when the screen is removed the balls gush forth, the back of the cabinet dropping behind them.

The coffin is pushed through to the cabinet while the back is raised; when it is drawn out, the back of the cabinet falls into place as before.

Chute Walls Are Mirrored. All of the tricks are easily explainable, when you know there is a chute behind the cabinet. But why does no one see it? The top, sides, and bottom of the chute are made of highly polished chrome: these act as mirrors, and reflect the backdrop from every angle.

With a background of a square pattern (Fig. 3), the illusion is perfect: even the outside corners of the chute, where the edges of the mirrors join, become too thin to be discernible. A mixed pattern, like that of an Oriental rug, will give a similar result.

Suitable lighting and a careful setup of the apparatus are necessary, and the cabinet must, of course, remain stationary.

In Model Form, this illusion can be set up on a miniature stage, built like a simple open-front box. The square pattern may be painted on the back wall of the box, with an opening cut for the mirror chute. This box might be set on a shelf or table in front of a curtained doorway or in a curtained corner, so an assistant could work behind scenes.

Plastic cups are used instead of pails, Ping-pong balls instead of tennis balls, and a doll for the coffin, instead of a girl. The handling of the illusion is essentially the same as for the stage-sized version.

The chute can be constructed of heavy cardboard and covered with glass mirrors instead of chrome. But care must be taken to reduce the joints at the edges to an almost hair-line thinness, in order to avoid their detection. Experimentation with both mirrors and lighting is necessary to gain the best results.

After "clean" job by cross-cut saw, the magician encloses the sawed edges with slides, moves the boxes apart and points out the girl's body has been severed. Moments later, she's quite herself again, magically.

How to Saw a Woman in Half

★ Here are two sensational ways this most spine-tingling of all great stage illusions is presented

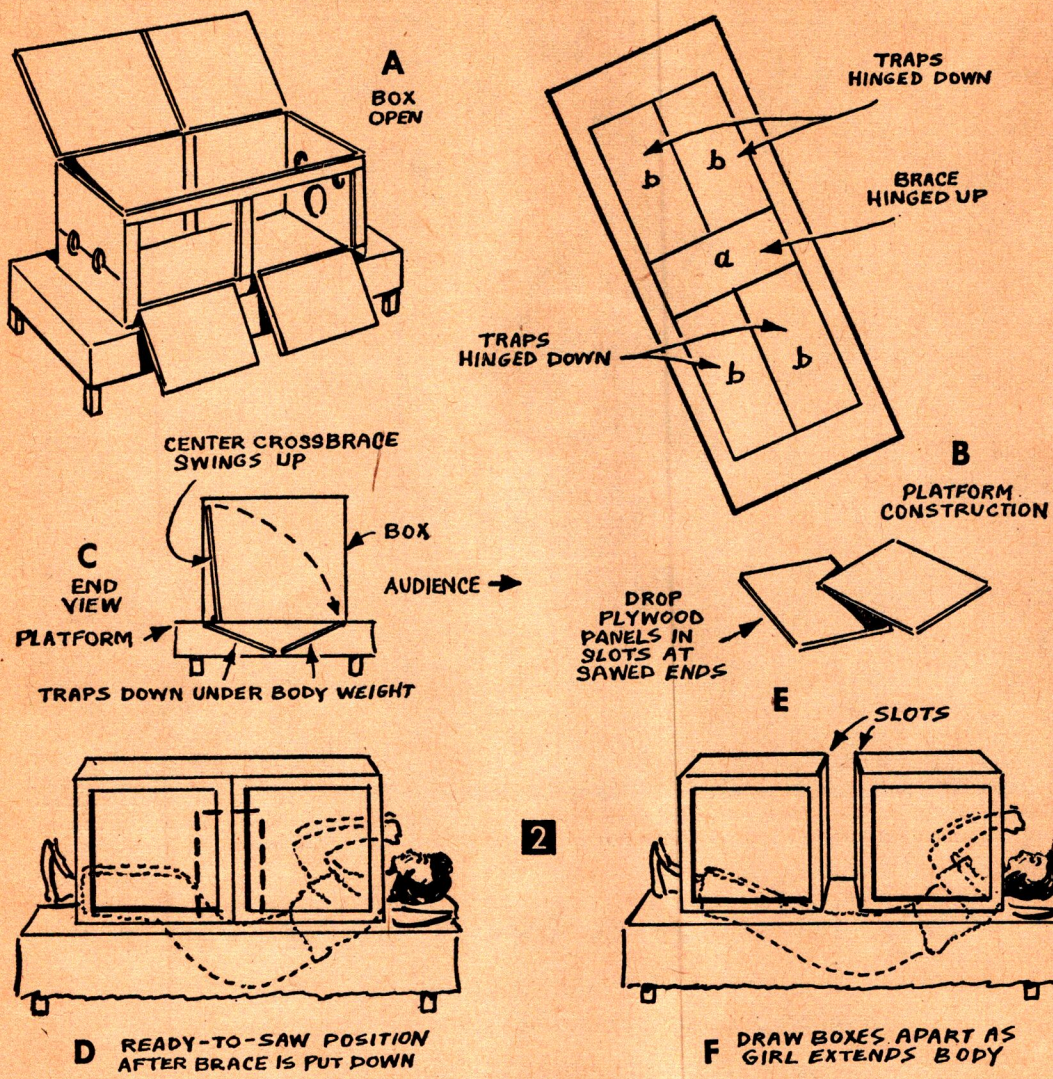
MOST chilling, as well as thrilling, of all modern stage illusions was—and still is—the sensational feat of "Sawing a Woman in Half." This is done without harming her, the girl being saved from injury or restored to her original form through magic, mesmerism, or whatever mumbo-jumbo the magician may prefer.

In the most famous version of this mystery, the victim is placed in a long box so that her head and hands extend from one end and her feet from the other. The box has doors in front and in the top, these being arranged in pairs side by side. They allow the box to be shown completely empty, before the girl is placed inside.

Once the doors are closed, only the girl's head, hands, and feet are visible, as her neck, wrists, and ankles are confined in stocks or pillories. There is no doubt about her being in the box, as she moves her head, hands, and feet at the magician's command. That being established, the magician orders two assistants to saw the box in half, straight across the middle, which they proceed to do.

Tension grows as the big cross-cut saw nears the bottom of the box. Soon, witnesses are sure that it is cutting through the girl itself, and finally, it reaches the long, shallow platform on which the box is mounted. Then, the magician takes two thin square panels, and pushes them edge downward between the halves of the long box.

The two sections are then moved apart, the girl's head and hands going with one, her feet with the other, while the magician walks between the separated portions. These now have the appearance of two square boxes, though exact shape may vary according to the size of the girl. The panel inserts serve as side walls, preventing any view of the girl's supposedly severed torso.



The halves of the box are then pushed together, panels removed, doors opened, and the girl emerges uninjured and unshaken by her ordeal, leaving the onlookers in a state of wonder.

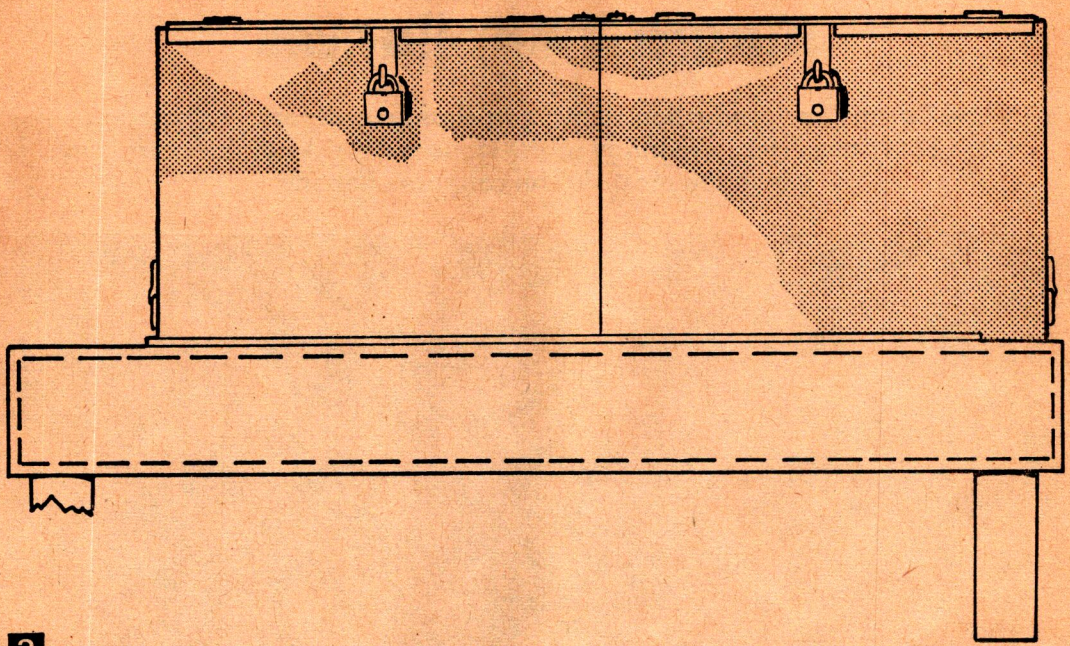
A Simple, Easily Built Version depends on a short box and a special platform, which actually serves as the bottom of the box, making the building all the easier. A tall girl is needed, and effort is made to disguise her height in relation to the length of the box.

As an example: If the girl measures 5 ft. from neck to ankles, the box should not be more than 4 ft. long. This discrepancy is not observable when the girl is standing beside the box or when she steps down into it.

Opened, the box appears as in Fig. 2A. The front doors are closed before the girl steps into the box from the top, so that her height is not noticed when she assumes a reclining position. Also, certain platform features must be concealed at this time.

Fig. 2B shows the construction of the platform. A strong cross-brace of 1-in. stock is built-in to appear as part of the platform. It is 12 in. or more in width, and hinged at the far end so it will swing up against the back of the box (Fig. 2C). On each side of this brace is a pair of trapdoors that hinge downward. Springs hold them in place until they give under the girl's weight.

The traps yield as the girl enters, going down into the platform which has a solid double bottom. When the girl stoops, she raises the brace to the back of the box, or an assistant does that while helping her into the box. The action of the four traps is shown in Fig. 2C. As she lies down in the box, she doubles her body into the bottom of the platform, as shown in Fig. 2D.



3 IMPROVED TWO-GIRL VERSION

Only the girl's head and feet are confined in the pillories at each end, as she thrusts her hands out through small holes just above the headstock. The springs press the traps upward, supporting her legs and shoulders. The magician or an assistant now looks down into the box, and releases the brace so that it drops down in place—over the mid-section of the girl's body.

The top doors are closed, and the box is sawed in half. To facilitate this, and prevent "injuring" the box, a pair of boxes are actually made and simply connected with strips of thin wood a few inches wide so that they appear to be one box. Only these outside strips are actually sawed, and they can be replaced with new strips for the next performance. When the saw reaches the bottom of the box, it is stopped by the thick brace now above the girl's body, to protect her.

Two square panels, which can be ¼-in. plywood, are pushed downward between the halves of the box, into slots at the sawed ends as in Fig. 2E. The half-boxes are then drawn apart a few inches, as the girl extends her body as much as possible (Fig. 2E). The hinged wide brace is kept in place by the weight of the boxes, and appears to be a solid portion of the platform top.

The sawed sections may be separated sufficiently for the magician to step through between them (Fig. 1). After that, they are pushed together and the plywood panels removed. When the girl is released from the stocks, she rises from the box, pushing up the brace. Once she has been helped out, the brace is lowered and dropped in place; the front doors can be opened to show the interior.

Two-Girl Version. A more elaborate stage version patented and performed by Horace Goldin uses two girls, one of whom is hidden in a double platform (Fig. 3). The illusion is presented in much the same manner, except that the original girl may be apparently hypnotized and lowered into the open box, by the two assistants or in a special cradle.

The "head half" of the box has a solid bottom, and the platform beneath is solid, too. But the "feet half" has two hinged traps that swing upward, and there are corresponding traps in the platform. The length of the box conforms to the girl's height, and the box must be high enough for her to draw her feet from their stocks, and double her knees and legs upward, so that she occupies only the "head" end of the box.

She does this after the box is closed, and the hidden girl then pushes her legs up through the traps and extends her feet through the stocks at that end. This exchange can take place, while the platform is being wheeled about to bring the head end toward the audience. Or it can be concealed by setting one of the panels against the front of the box, so that it projects beyond the end and hides the girl's feet long enough for the exchange.

With this two-girl method, the sawed halves may be widely separated, adding that much more to the effectiveness of the illusion. Only the "head" end of the box is moved extensively; it may even be lifted slightly by two strong assistants. The "feet" end can be slid back and forth a few inches.

Magical Appliances

★ **Good "props" or production items, can change ordinary performances into great ones. Here are many of the standard "tricks of the trade" on which the most skillful conjurors depend**

MANY special appliances are used in working magic, and while some are easily constructed or made up, others have become such standard items that it is generally cheaper and more satisfactory to obtain them from regular magical dealers or novelty shops that handle magical supplies.

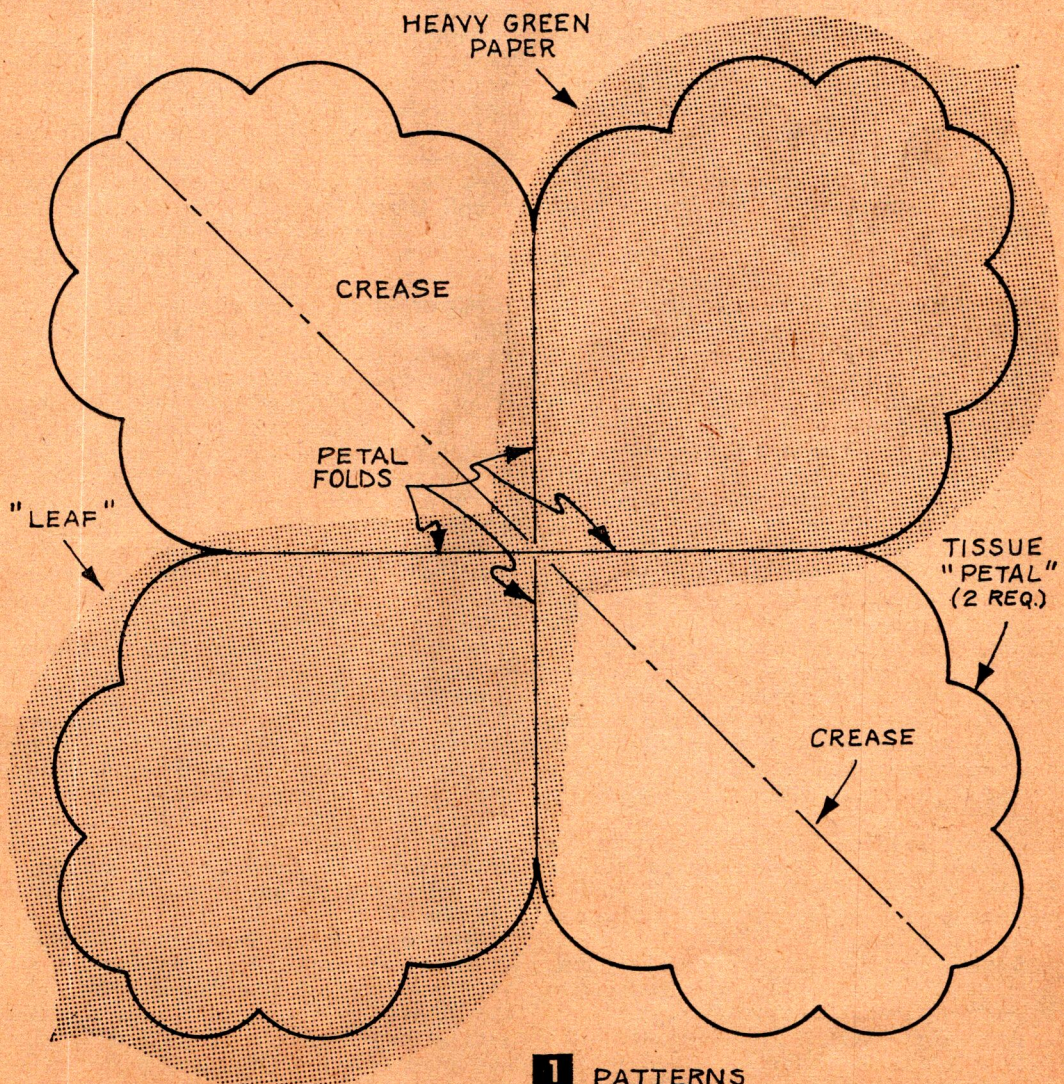
Production items are of special importance. These are compact or collapsible articles that can be produced from boxes, tubes, etc. Many date back to the old days when magicians brought everything "out of a hat," but new items have been adapted for modern usage. Among production "musts" are:

Silk Handkerchiefs: These come in 12-in. square and 18-in. square sizes for general use, the smaller silks being used in many "vanishes" and "appearances" where very little space is available. For productions (from cabinets, etc.) the 18-in. silks are used, as well as others as large as 24 and 36 in. square.

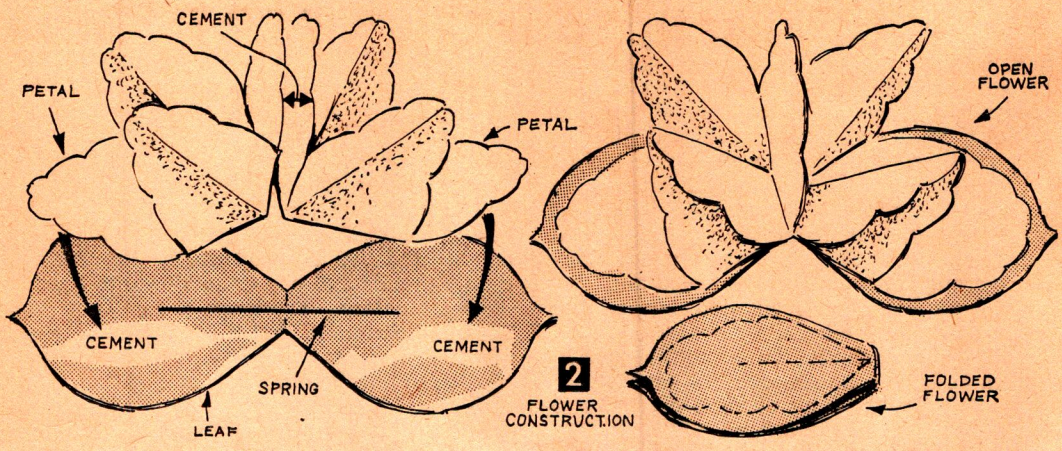
Suitable silks must be of very light weight and as near pure silk as possible, with very narrow hems. These are sometimes obtainable at chain stores and department stores, but magical dealers stock them continually. These come in solid colors, or in the form of:

Rainbow Silks, the term applied to silks of varicolored patterns, or sections. These can be made by knotting white silks and dipping the ends and center section into dyes of different colors. Tightness of the knots will govern the amount that the colors run. Such silks, as well as others with elaborate patterns, are obtainable from magical stores.

Spring Flowers: These are made by cutting a piece of tissue paper to form a "petal" as shown, then folding it and placing it between a pair of "leaves" cut from heavy green pa-



1 PATTERNS



2 FLOWER CONSTRUCTION

per. A strip of thin copper, brass or steel is cut down the center and the halves are bent apart, so they can be glued between petals and leaves.

Such flowers can be compressed and held in a stack by a clip or silk handkerchief, wound tightly about them. Released, they "spring" open, and expand in surprising fashion. Flowers with double petals (pasted back to back) make a still better show. Magic stores stock them.

Pop Balls: These are simply flat paper decorations that open into spherical form. They are fitted with two hinged plates of aluminum, and a coil spring, so that they pop open automatically when released. Also supplied by magical dealers.

Paper Coils: Used as party favors, especially at Hallowe'en or New Year's, these colored paper coils unwind as they are pulled from a production box, and make a great show. Magical dealers supply them in much larger sizes, known as "hat coils," making an ideal production.

Spring Items: These are patterned after the more or less familiar "jumping snakes" that are frequently used as a joke. The "snake" consists of a long spiral spring, covered with colored cloth to give it a reptilian appearance. As a production item, it is brought slowly from a box, so that it appears to be growing instead of jumping. Still better are such spring items as a fake carrot, or a string of sausages (with a short spring for each link).

Rubber Articles: These are compressible and made to expand into such shapes as eggs, bottles, ice cream cones, fruits, and skulls—all very genuine in appearance. Available at magical suppliers.

Special Glasses: Trick tumblers have long been useful in magic. They are fashioned in many forms, including the following:

Bottomless Glass: A glass from which the bottom has been removed, so that if it is placed on the hand, an article dropped into the glass can be secretly removed after the glass is covered with a handkerchief.

Tube Glass: This has a glass tube in the center, so that when filled with milk, handkerchiefs can be drawn up through and apparently produced dry.

Slit Glass: The slit is cut horizontally just above the bottom. Coins dropped into the glass slide out through the slit into the hand.

Ball Glass: Much like the slit glass, but cut with a large circle at the back, so that a ball can be dropped into the glass and later rolled out into the hand.

Mirror Glass: Glass with a mirror partition; the type used in the Flying Handkerchief trick (p. 105).

Though some of these glasses can be cut to order, they do not always fill the bill. Magical dealers supply them in perfect form, in an unbreakable plastic as well as glass. It is best to use glasses with fluted sides, and a tinted glass helps hide any trickery. These are the types usually supplied.

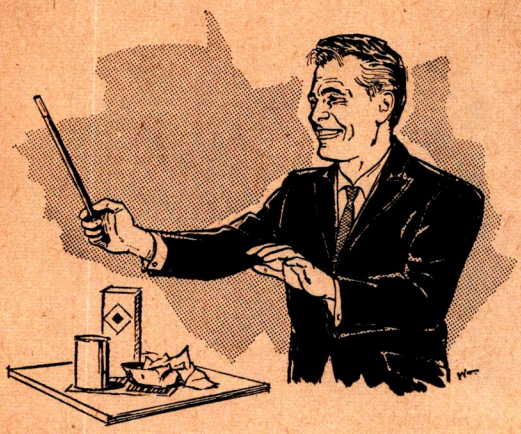
Tables: In addition to the black-art table, described on p. 34, magicians use several other styles. Dealers supply tables in three parts: a base, either solid or consisting of three legs; a center rod, which with some tables breaks in two; and a top fitted with a flange that screws onto the rod.

Any top can be made into a "black art" pattern, with wells, provided it has a drape deep enough to hide the wells, but it is often good practice to have one or two side stands with plain tops, or simply an innocent cloth hung as an ornamental drape. Some of these are constructed of wood, with legs and center rod painted aluminum, to match the metal table base.

Wands: These are easily made of dowel stock, usually painted black, with gold or silver tips. These are described in detail under the "Traveling Wand," which also explains the making and use of a "shell" wand, and in "Chemical Magic" which shows how to make a chemical storage type.

How to Present Your Own Magic Show

★ Tips on props and preparation—Sample magic acts using tricks described in this handbook—Substitutions



Keep smiling and move quickly to new tricks. The clever performer adds interest to the show by the way he handles himself.

IN PUTTING on a magic act, your first thought should be to give it variety where the tricks are concerned. No two tricks should be too much alike. If you vanish a glass of water, do not follow it with a bowl vanish. They don't belong in the same act.

If you produce silks from a canister, don't make another silk production from a box. In smaller tricks, some duplication is allowable, as with Silk and Candle, and Silk to Egg, each of which requires vanishing a handkerchief. But with such tricks the climax is different, which is what counts most.

It is good to follow a slow trick with a fast one, so that the act will not drag. Tricks where articles are passed for examination, naturally take much more time than those with quick suprise endings.

Furniture to Support Props. In addition to props, or actual apparatus, tables, chairs, and stands are needed in the act. It is possible to work from one table, having some tricks set up there, with others on a table in the background. If you build your own magic tables, two make a nice setup enabling you to work from one to the other.

Still, a background table, or a handy chair or low stand, is helpful when laying certain props aside, and picking up others for the next trick. By working some tricks on trays, a tray itself can be laid aside at the finish, clearing the way for the next.

In the first sample act given below, the performer can get along without the aid of a special table or an assistant. The whole thing is a one-person operation throughout. If any assistance is desirable, members of the audience are called upon to help. Tables are needed, and the magician will feel more "at home" if he carries his own.

In the second and more elaborate act described later, a special table of the "Black Art" type is advisable, though it can be dispensed with by slightly modifying the act. An assistant is needed to help with certain important tricks. This will also speed the act, as the assistant can bring on tricks as needed.

Sample Magic Act
(Without Assistant)

1. Traveling Wand
2. Flash Production Tube
3. Silk to Egg
4. Vanishing Glass of Milk
5. Block, Frame, and Ribbon
6. Confetti into Candy
7. Cabalistic Cube
8. Spooky Card Trick
9. Rising Cards
10. Egyptian Torture Cabinet or Silk Production Cabinet

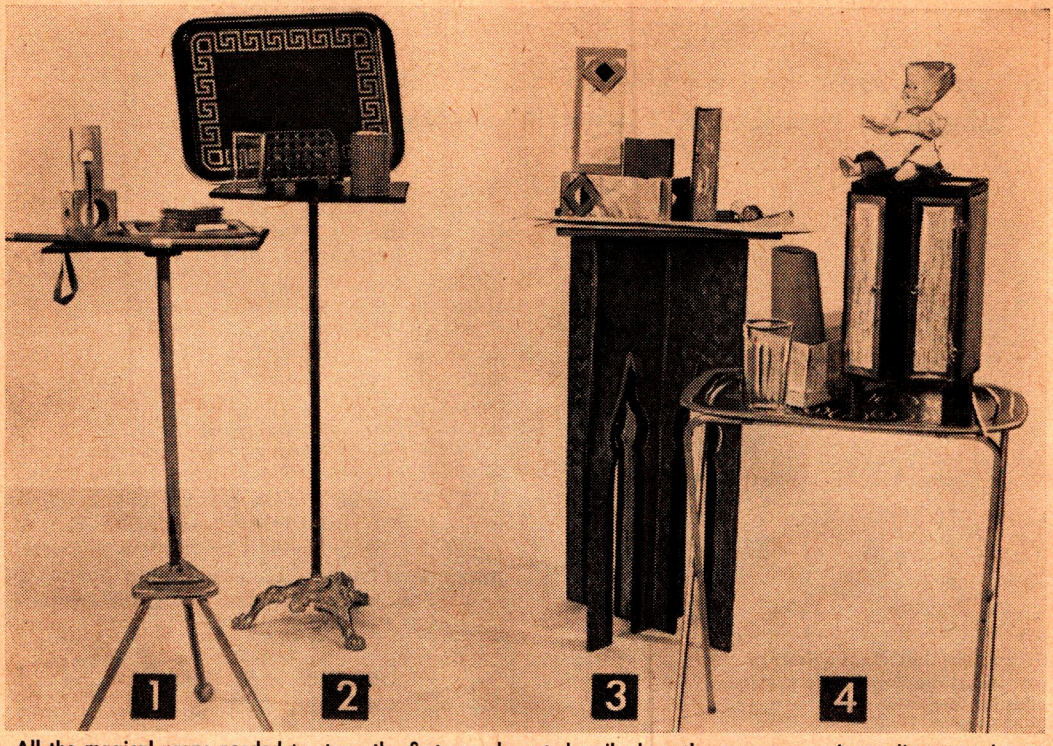
A center table is needed for this setup, with a table or chairs in the background or at sides. Two tables can be used, if you prefer to work from one to the other.

When performing with a single table, have the wand lying at the front, with flashlight and tube beside it. The tray for the milk vanish is all set up on the table, and beside it the cylinder for that trick. Behind the cylinder is the fake egg for the silk to egg.

All other items, including a box of confetti, are on a table or chair. The outfit for the Cabalistic Cube, however, can be resting on a small tray, so chimneys and cube can be in their correct positions beforehand, and it will only be necessary to bring the tray forward.

If two tables are used, have Candy and Confetti, and Cabalistic Cube, all set thereon. Other items can be on that table, unless they clutter it, in which case, they should be put on a chair, stand, or table in the background.

Ideal Arrangement for Performance Without Assistant



All the magical props needed to stage the first sample act described on these pages are in readiness on these four tables: (1) Small wooden slide stand with dowel legs and upright is light in weight, very economical, and painted silver to resemble metal; (2) Kellar Stand, a standard magic table on specially cast base, sold by magic dealers; (3) Table described in "Building and Using a Magic Black-Art Table," p. 34; (4) Snack tray on stand, light to carry and helpful in setting stage, obtainable at many dime stores and elsewhere. Normally, these tables would be spread wider so the performer could work well between Nos. 2 and 3.

Begin the Performance with Traveling Wand and then take up the Flash Production Tube. Spread the first silk produced over side of table, and drop its end in back of the cylinder standing there, so that you can pick up the special egg with it and go right into Silk to Egg.

Lay these items aside on a chair or stand as you finish with them, and work the Vanishing Glass of Milk. Set aside tray, cylinder and stand—but not the milk carton, this must remain on table or you will expose the trick.

Follow with the rest of the act, bringing items forward as needed and putting them back on the chair or background table to make way for succeeding steps.

The Egyptian Torture Cabinet and Silk Production Cabinet should not be worked in the same act, as both use the identical form of concealment. However, if the Upside Down Cabinet is substituted for the Egyptian Torture Cabinet, the Silk Production Cabinet can be added for the finish.

Presented early in the act, the Flash Production Tube will not conflict with the more spectacular Handkerchief Production Cabinet, a fine choice to end a show.

Second Sample Act
(With Assistant)

1. Silk From Flame
2. Silk Vanish from Cone
3. Candle to Silk
4. Candle from Pocket
5. Matchbox and Ribbon
6. Baffling Blocks
7. Solid Through Solid
8. Ink to Water
9. Vanishing Bowl
10. Chinese Rice Canister
11. Card in Frame
12. Rising Cards
13. Vanishing Silk from Glass
14. Flying Silk
15. Knife Box (Decapitation)
16. Breakaway Vanishing Box

The first five tricks in the second act form a sequence. Set them up, so that the matchbox used in the Flame production is already fixed for the Matchbox and Ribbon.

The Baffling Blocks can also be set up at the start, and after you dispose of the extra block in the table well, your assistant should come on with a tray, place the original blocks

Your Set-Up

On Table 1: Wand for opening trick, slates, chalk and cards for Spooky Card Trick; apparatus for Block, Frame, and Ribbon.

On Table 2: Set-up for Vanishing Glass of Milk, with glass and cylinder in front of tray, carton of milk and fake glass out of sight behind tray.

On Table 3: Two chimneys and cube for Cabalistic Cube; to their right, the tube for Flash Production Tube with silk-loaded flashlight beside it; in front, the two paper envelopes for Traveling Wand ready for pick-up at start of opening trick; behind chimney are the special egg for Silk to Egg with an extra glass, pack for the Rising Cards with a handkerchief hiding it.

On Table 4: Glass for Confetti into Candy, confetti in low box where cardboard cone stands; Egyptian Torture Cabinet with doll sitting on it, one spike beside it and others behind it.

Your Performance

Pick up the wand from Table No. 1 and envelopes from Table No. 3 for Traveling Wand, finally laying wand down at back of No. 3. Next, work the Flash Production Tube, laying props back on No. 3 and getting egg to go with silk in Silk and Egg. Break "egg" in extra glass at back of No. 3.

Go to Table No. 2 and work Vanishing Glass of Milk, finally laying tray on chair or handling it off stage with all props of the trick except the milk carton which remains on No. 2. This allows space on that table to place props for Confetti into Candy. Work Block, Frame, and Ribbon first, replacing them on No. 1 and then go into Confetti into Candy, which stays on No. 2.

Next, perform Cabalistic Cube at Table No. 3 and, when finished, place props on No. 4 in the space formerly occupied by Confetti into Candy props. Along with them, place the props from Flash Production Tube and extra glass from Silk to Egg.

Move over to Table No. 1, work the Spooky Card Trick and put the slates back there. Switch the pack on No. 3 for Rising Card pack behind handkerchief. After working Rising Card Trick there, move the pack, the handkerchief with hidden pack, and the wand from No. 3 to No. 2. This clears No. 3 for the finale—the Egyptian Torture Cabinet—which is taken from No. 4.

---

and tubes on it and walk off with them.

If the special black-art table is not used, the assistant can bring in the blocks set up on a tray. You will then work the tricks on the tray, covering the hidden block with the tube at the finish, so that your assistant can carry off the tray. In either case, the assistant should bring on the Solid through Solid frame and hand it to you before taking off the tray with the blocks.

While you are working Solid through Solid, have your assistant put the glass of "ink" on the table. After the "ink" is changed to water, the assistant comes on with bowl, cloth, and tray. Now you can pour the water into the tray, cover it with the cloth, and do the Vanishing Bowl.

By the time the bowl has vanished, the assistant should return with another tray—or the same one!—bringing the equipment for the Chinese Rice Canisters. After working this trick, remove it from the tray, then do Silk from Glass and Flying Silk in combination. While performing these your assistant brings on the Knife Box, ready for you to work the decapitation with him or a volunteer from the audience. When this box is set aside, all is ready for the Breakaway Vanish, prepared all along, on its own stand.

Various Substitutions are Obvious. Block, Frame, and Ribbon can be used instead of Matchbox and Ribbon. Vanishing Glass of Water can be replaced by Vanishing Bowl, if a table well is available. Spirit Slates can be substituted for Spooky Card Trick and either can be put into the second sample act. Include Wrist Stocks in either act.

The Rising Cards are specially featured in both acts, but can be omitted if the stage setup is not suitable. You can easily avoid any duplication in the two acts, so each can be done before the same audience on different occasions.

Anyone ambitious enough to plan and build a "Sawing a Woman in Half" illusion can include it as the feature of the act.

Classified MARKET PLACE

For information on Classified ads—to be included in our next MAGIC HANDBOOK and other Handbooks—write C. D. Wilson, Manager, Classified Advertising, SCIENCE and MECHANICS HANDBOOK DEPT., 505 Park Avenue, New York 22, N. Y.

ADDITIONAL INCOME

WHOLESALE Magazine Subscriptions—50% Commissions—Bonus. Qualified Magagencies, 451-GCA, Kingston, Brooklyn 25, New York.

AUTO PARTS & ACCESSORIES

TRUCK Tires, Reconditioned, Guaranteed 825x20 $15.50; 900x20 $17.50; 1000x20 $19.50. Freight paid on 3 or more. Mace's Tire Sales, Decatur, Alabama.

MAGIC Car Control. Great improvements economically. Sensational Facts. Palmer Sales, Box 93, Lowellville, Ohio.

TIRED of paying excessive auto maintenance costs? Repair it yourself. Easier than you think in "Car Repair Handbook" #578. Stop oil leaks, make breaks safe, fix noisy muffler, avoid stalls. Special insert: gas mileage and speed computer. 162-page car bible yours for only 75¢. Science and Mechanics, Dept. 589, 505 Park Avenue, New York 22, N. Y.

AUTOMOBILES & MIDGET CARS

KART Type Plans $2.98. Detailed Dimensions. Fab Kraft, 264 North Elm Street, Massapequa, N. Y.

OLD Car Magazine. Send for your free sample copy. Franson's Motor News, Box 1568, San Diego 12, Calif.

COLLECTOR'S item—"The New Cars 1961" #573. Here's your chance to really compare last year's with the '62 lineup. All prices. 162 pages fully illustrated. Valuable engineering, styling details on all domestic, major imports. Limited supply at 75¢. Science and Mechanics, Dept. 589, 505 Park Avenue, New York 22, N. Y.

BOOKS & PERIODICALS

BOOKHUNTERS! Scarce, Miscellaneous Books, Supplied! Atlantic Book Service, 10F Cedar, Charlestown 29, Mass.

HOBBYISTS, Pen-Pals, want to earn more money, get better job, enrich your life? Send 25¢ for our informative literature, catalogues, magazines, etc. Universum, Box 948, Chicago 90, Ill.

BUSINESS OPPORTUNITIES

FREE Report: "609 Unusual, Successful Businesses." Box 1001-SMH, Evanston, Ill.

SHARPEN Saws and Lawnmowers the profitable way. Send for free literature. Max Manufacturing Company, 138 Stockton Avenue, San Jose 26, Calif.

OPERATE Profitable Manufacturing Business. Valuable Information Free. Colen, 7731-SM Yates, Chicago 49.

FREE, "How To Win Contests." Conte-Star, Box 51-SCG, Desplaines, Illinois.

500% PROFIT new easy mail-order setup selling name lists. Write Factory Agents Bureau, 135-A Liberty, New York 6, N. Y.

FREE Book "711 Bizarre, Successful Ventures." How I retired. Work Home! Halings-6, Carlsbad, Calif.

New: Build Waterfalls, Fountains, Parts Supplied. Box 3003, Pasadena, Calif.

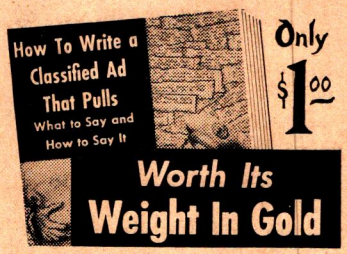
RETIRE! with small investment. Helium-oil-gas leases near major oil companies. $2 per acre. Security, Box 525, Phoenix (1), Arizona.

EDUCATION & INSTRUCTION

CALCULATING Made Fast, Easy. 10" Slide Rule, Instruction Book. Complete! $2.00. Colen, 7731-SM, Yates, Chicago 49.

LEARN While Asleep with our recorder, phonograph or amazing new "Electronic Educator" endless tape recorder. Details free. Research Association. Box 24-CC, Olympia, Washington.

NOW! Learn Electronics—New easy method. Amazing Results. How to repair T.V. Earn big money complete instructions $1.95. Efco, Box 1158, Torrance, Calif.



Make your classified ad pay! This handbook tells how—with examples; included is a Credit Certificate worth $2.00 toward the cost of a classified ad in S & M. For a copy of "How to Write a Classified Ad That Pulls," send $1.00 to Science and Mechanics, Dept. CDW-589, 505 Park Avenue, New York 22, N. Y.

EMPLOYMENT SERVICE

OVERSEAS Employment, Benefits, Guides on Hiring Procedures, Information $2.00 ($2.25 Airmail). Foreign Research Report, CL31, P. O. Box 1308, Chicago 90, Illinois.

FOR INVENTORS

INVENTIONS Wanted for immediate promotion; Patented; unpatented. Outright cash; royalties! Casco, Mills Building, Washington 6, D. C.

SAVE High fees! Apply for your Patent yourself. New "Do-It-Yourself" Patent Kit now makes it easy! Free "Registration Form." Miss Susan Blain, 306 Carry Building, Washington 5, D. C.

PATENT Searches, $6.00, complete with comprehensive report and Official Patent Office copies of related patents. Certified, Airmailed. For free "Invention Protection Form," and "Patent Information," write: U.S. Inventors Service, Headquarters Building, Washington 6, D. C.

CASH or royalties for inventions! Patented; unpatented—All types considered. International, 1170 Broadway, New York 1, New York.

PATENT Searches $6.00, complete. Inventors, attorneys, manufacturers use my "World-Wide" Airmail service. Free Invention Protection form and "Information Every Inventor Needs." Miss Jean Haywood, 1029 Vermont Ave., N.W., Washington 5, D. C.

NO Letter to write! Special "Invention For Sale" form presents your idea to buyers. Tells them what they must know, best way. Package of six forms, $1.00. Science and Mechanics, Dept. CDW-589 505 Park Avenue, New York 22, N. Y.

FOR THE HOME

PHOTOGRAPHIC Murals bring the outdoors, inside. Individually made any size. Send 50¢ for brochure. Al Greene Associates, 1333 South Hope Street, Los Angeles 15, California.

BOMB shelter for your home only $180, plus more than 30 home improvement articles saving you $1,000. Plumbing, furnace repairs, constructing dormers, room additions, tiling, rewiring house. Easy as ABC in valuable "Home Repair Handbook" #577. Send 75¢ to Science and Mechanics, Dept. 589, 505 Park Avenue, New York 22, New York.

LADIES—and gents, too—simple household maintenance problems solved! "1001 How-to-Ideas" #575. So many useful ideas to speed your work. 160 valuable pages. Just 75¢. Science and Mechanics, Dept. 589, 505 Park Avenue, New York 22, N. Y.

HELP WANTED

THOUSANDS of Job openings. All trades. Top wages. Benefits. Travel Expenses Paid. Nationwide-Worldwide, Box 12, Detroit 13, Mich.

HYPNOTISM

SELF-Hypnosis may help you many ways! Learn quickly, easily by tape or LP-record. Free literature. Smith-McKinley Co., Box 3038, San Bernardino, Calif.

HYPNOTIZE Self, Others while asleep with amazing hypnotic phonograph records, tapes. Catalog free. Research Association, Box 24-C Olympia, Wash.

HYPNOTIZE Successfully! "One Word." "Instantaneous." Against Will Methods Exposed! Complete Illustrated Course. Including "Secret Nerve Pressure Technique" $1.00. Fowler, Box 439, Woodbury, New Jersey.

INVENTIONS WANTED

INVENTIONS Wanted for immediate promotion! Patented; unpatented. Outright cash; royalties! Casco, Mills Building, Washington 6, D. C.

CASH or Royalties for inventions! Patented; unpatented—all types considered. International, 1170 Broadway, New York 1, New York.

NEED Inventions now for manufacturers. Unparalled service. Professional Engineer, Box 113-A, Hampton, New Hampshire.

INVENTORS! Why be broke? Turn your invention into cash. If salable, we can sell it. Write Universal Inventions. Marion, Ohio.

INVENTIONS Wanted by 140 manufacturers. Do you have an idea for a new product or a way to improve a product already in use? Send your name and address for free details to Science and Mechanics Magazine, Dept. CDW-589, 505 Park Avenue, New York 22, N. Y.

MACHINERY TOOLS & SUPPLIES

RADIAL Arm Saw for under $100.00. Information Free. Roberson, 14D Brooks Drive, Austell, Georgia.

S & M Tool Directory #581—The definitive directory of workshop tools—hand and power—illustrating, describing and giving manufacturers for all the woodworking, and the most useful metalworking tools for home craftsmen. Send $1.00 to Science and Mechanics, Dept. 589, 505 Park Avenue, New York 22, N. Y.

MAGIC TRICKS, JOKER NOVELTIES & PUZZLES

2700 NOVELTIES, Tricks, jokes, fun-makers, hobbies. World's biggest gadget catalog 10¢. Johnson-Smith, D-517, Detroit 7.

WORLD'S Greatest magic & fun catalog! Just off press—all new! 160 Pages Thick! Giant edition! Over 1000 items at bargain prices! Rush 25¢ today! Free trick included! House of 1000 Mysteries. Dept. SMA—Trumbull, Conn.

AMAZING New illustrated "Lock Picking Secrets." Only $1.98. Mystic, Box 7400-SM, Washington 4, D. C.

25,000 PROFESSIONAL Comedy Lines. Catalog 10¢. Orben Brooks, Hewlett, N. Y.

MAIL-ORDER OPPORTUNITIES

MANUSCRIPT—"Mail Advertising Ideas, Slogans, Phrases" explains "how and why" of increasing your potential mail-order sales. $2.00 prepaid. (Bonus offer included) ReGal Crafts, 904 North Labrea, Inglewood, California.

MISCELLANEOUS

1,000,000 BOOKS—15¢ Each. Every Subject! Catalogs Free! Mailway, Box 124-SM, Stuyvesant Station, New York City-9.

196 DO-It-Yourself project plans described in our illustrated catalog. Plans for everything from arc welder to front steps, boats to toys. Send 20¢ to cover postage and handling now for Craftprint Catalog to Science and Mechanics, Dept. CDW-588, 505 Park Avenue, New York 22, New York.

MISSILES & ROCKETS

ROCKET Supplies: Kits, Parts, Engines, Chemicals. New Illustrated Catalog 25¢. Central Rocket Company, 389 Waupaca, Wisconsin.

MONEYMAKING OPPORTUNITIES

MONEY Galore! Spare Time, Sensational Facts $1.50: Satisfaction Guaranteed NatuRex, Yucaipa 8, California.

PART Time Income if you can assemble and check electronic projects for Science and Mechanics magazine. Must live in Chicago region. Describe your experience, shop facilities etc. in letter addressed to Electronics Editor, Science and Mechanics, 505 Park Avenue, New York 22 N. Y.

MUSIC & MUSICAL INSTRUMENTS

ACCORDION Repair Guide $3.00. How To Build Accordions $5.00 Complete Charts, Parts, Satisfaction guaranteed. Fischer's, 1000 Jersey, Bellingham, Wash.

OLD GOLD WANTED

We Buy It! Gold, Silver and Platinum articles. Send them to Electro Company, 1042 Highland Avenue, Buffalo 23, N. Y.

PATENT SERVICE

PATENT Searches, including copies of nearest patents, $6.00. Reports airmailed within 48 hours. More than 200 registered patent attorneys have used my service. Free invention protection forms. Write Miss Ann Hastings, P. O. Box 176, Washington 4, D. C.

CASH or royalties for inventions! Patented; unpatented—All types considered. International, 1170 Broadway, New York 1, New York.

INVENTIONS wanted for immediate Promotion; Patented; Unpatented. Outright cash; Royalties! Casco, Mills Building, Washington 6, D. C.

SAVE High fees! Apply for your Patent yourself. New "Do-It-Yourself" Patent Kit now makes it easy! Free "Registration Form." Miss Susan Blain, 306 Carry Building, Washington 5, D. C.

PATENT Searches, $6.00 complete with comprehensive report and Official Patent Office copies of related patents. Certified, Airmailed. For free "Invention Protection Form," and "Patent Information," write, U. S. Inventors Service, Headquarters Building, Washington 6, D. C.

PATENT Searches $6.00 complete. Inventors, attorneys, manufacturers use my "World-Wide" Airmail service. Free Invention Protection form and "Information Every Inventor Needs." Miss Jean Haywood, 1029 Vermont Ave., N.W., Washington 5, D. C.

PERSONAL

MEXICAN Legal Matters. A Espejo, Box 217-M, Tijuana, Mexico.

PRINTING, MIMEOGRAPHING & MULTIGRAPHING

SCREEN Print dry Photo Stencils up to 22 x 28, Art Photo enlarging service. Boettger, Box 96-A, Dorothy, N. J.

PRINTING OUTFITS & SUPPLIES

RUBBER Stamp outfits, Supplies. Kiewiet, 2025 Barney Road, Kalamazoo, Michigan.

RADIO & TELEVISION

TRANSISTOR batteries 9 volt 006P—39¢. Guaranteed fresh. A. Johnson, 233F, Barrett Avenue, Jamestown, N. Y.

BEST Course on Television Service Available. International Electronics, 216-S Jackson Blvd., Chicago 6, Ill.

TRANSISTOR testor, printed circuit phono amplifier—complete plans for making these and more than 30 other projects in "Radio-TV Experimenter" #576. 24-page "White's Radio Log" included with 186-page authoritative book only 75¢. Science and Mechanics, Dept. 588, 505 Park Avenue, New York 22, N. Y.

REMAILING SERVICE

HAWAII Remailing 25¢. Details free. Coe, Box 984-SM, Kailua, Hawaii.

SECRET Mail address, $3.00 monthly. Reiss, Box 129-A, New York 18, N. Y.

SARASOTA, Florida Single 25¢. Monthly $3.00 Confidential. A. Nunnally's Box 775.

RUBBER STAMPS

UP TO 4 Lines $1.50 Postpaid. Centers Enterprises, Kopperston 4, West Virginia.

THREE Line Pocket Stamp with pad or office type. $1.00. W. Atherton, Box 61, Randolph, Massachusetts.

STAMP COLLECTING

66 DIFFERENT, Old United States, Pictorials, Topicals, Commemoratives, etc. 6¢. Worldwide Approvals. Telec-Arts, Milford, Connecticut.

1,000 DIFFERENT $1.00 with approvals only. Alfred Jacobsen, Crompond, N. Y.

CANADA Mint three value set, just 10¢ with approvals. Tremere, Ormiston, Saskatchewan.

VATICAN Mint Lourdes' Airmails'. Approvals. Snedco, Box 205-B, Waldwick, New Jersey.

BRITISH West Indies—60 Different $1.00. 100 Different $2.00. Satisfaction Guaranteed: Harold Rajnauth, Box 267, Trinidad, West Indies.

2000 STAMPS $2.00—On and off paper. Good variety. World wide. Many pictorials. No approvals follow. Satisfaction guaranteed. Whalen, 1435 First Ave., Oakland 6, California.

START YOUR OWN BUSINESS

HOMEWORK ideas galore. Mail Gazette" 25¢. Mampa, 555 Surf, Chicago 14.

START planning for your security tomorrow. Send 75¢ for Income Opportunities book, No. 550, to Science and Mechanics Magazine, Dept. CDW-588, 505 Park Avenue, New York 22, N. Y.

TREASURE FINDERS

GOLD Silver Indicater $20.00. Pamphlet Free. George Simpson, Tecopa, Box 96, California.

WELDING EQUIPMENT & SUPPLIES

FREE welder catalog. Kits, build 350-ampere welder using aircraft generator, plans 25¢. Le Jay, Minneapolis 20, Minn.

WOULD YOU BE HAPPY MAKING MONEY IN YOUR OWN BUSINESS?

Then get a copy of *Income Opportunities*, a big, 192-page book that analyzes over 30 real-life success stories and step-by-step shows you how you can duplicate their success and achieve true financial security—while being your own boss! This book tells you *how* to start either a part-time or full-time business of your own with minimum investment, how to get and keep customers, how to plan the business' future and your own.

SCIENCE and MECHANICS MAGAZINE Dept. 589
505 Park Avenue, New York 22, N. Y.

Enclosed is 75¢. Please send me, all charges prepaid, a copy of INCOME OPPORTUNITIES, No. 550.

NAME_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

SELECT ONE OF THESE PLANS FOR YOUR NEXT PROJECT

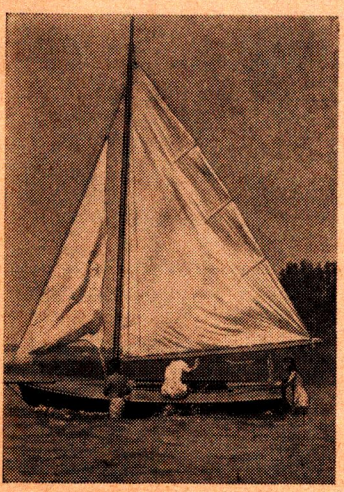
For our readers who enjoy building things in their workshops, we offer a wide variety of projects in our line of craft prints—each one of which has been designed by a master craftsman. Special thought has been given to the design, its utility value and ease of construction. Many of the plans are full-size patterns. Others give the necessary parts in full-size to simplify construction. All of the projects listed in this catalog have been built. You can proceed with the assurance that your finished project will give you complete satisfaction if you follow our detailed, yet easy-to-understand instructions. Materials lists are included to aid you in ordering the necessary supplies.

SAIL BOATS

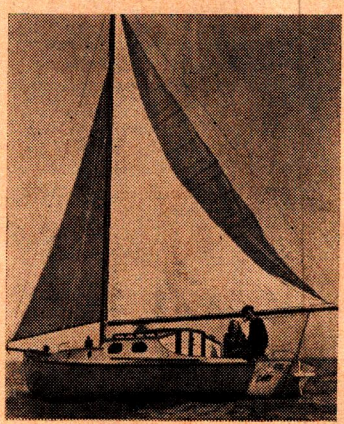
Sailing Dinghy—No. 20—**$1.00**

20. BLUE BIRD. Most small dinghies do not sail well but this 10-ft. long dinghy is fast and points fairly well. It makes an excellent utility boat, and, if sailing equipment is not available, you can use the boat with a pair of 6½-ft. oars or with a long shaft Evinrude outboard motor of not over 3 hp. Difficult joinery work of construction is eliminated. Constructed of mahogany, birch or exterior plywood. Suitable for car-top carrying. Length, 10 ft. Beam, 53 in. Depth, 18 in. Weight complete, 110 lbs. Sail area, 60 sq. ft. $1.00.

30. FALCON. As a general purpose sailboat, the "Falcon" is ideal for bay, lake and river sailing. It points closely and easily outdistances comparable one design class boats such as Snipe and Comet sailers. And she will pace neck and neck with 18 footers with considerably greater sail spread. The speed of this boat seems little affected by whether two or four passengers are aboard, which is unusual for most small sailboats. The construction is exterior plywood over a longitudinally stressed framework. The Semi-Vee bottom design of this boat was scientifically worked out using the same techniques of design used for schooners and large sailers. Weight complete of "Falcon" is 475 lbs. Sail area, 118 sq. ft. Length, 14 ft. For those who want the very latest and best in sailing craft, here's your boat. $1.00.



14 Ft. Sailboat—No. 30—**$1.00**



Motor Sailer—No. 53—**$1.00**

53. GYPSY. The design for this 24-ft. motor sailer includes the improvements tested and developed over a 6-year period on a motor sailer that covered more than 6,000 miles in all kinds of weather, under all manner of conditions, in the Gulf of Mexico. As a result, "Gypsy" offers an ideal design for the boat lover who wants a sea-going motor sailer. It will take 10 to 25 hp motors and will deliver speeds around 10 mph. With a sailing rig and a fair wind it will loaf along at 3 to 8 mph. Building "Gypsy" is really an ambitious undertaking. But the investment will pay handsome dividends over the years in relaxation, enjoyment, comfort and satisfaction. $1.00.

64. SEA SKIFF. There have been sea skiffs and sea skiffs! But here is one that combines all of the best features of many types of skiffs in one boat based on years of actual experience. It is quickly built over an ingenious method of framing with exterior plywood that will retain its leakproof qualities even if left to dry in the sun for long periods. This sturdy skiff may be rowed, powered with air-cooled inboard motors or outboard motors, or rigged for sailing. As a sailer it is dry, light, and fast in a good breeze. Length, 13½ ft. For use in all types of water. $1.00

106. PETREL. As a sailboat, "Petrel" fulfills the greatest possible variety of uses in one model. It can be built as an open cockpit racing craft or as a cabin sailing model with accommodations for overnight trips and shelter on fishing excursions. Seats 4. Either model is constructed from the same basic design and possesses unusual seaworthiness, stability, trim attractive lines, speed and ability to handle well. Construction is easy and inexpensive, utilizing exterior marine plywood. It is also adapted to outboard or air-cooled inboard motors from 1 to 6 hp. Length, 16 ft. Beam, 6 ft. Depth, 23 in. amidships. Weight complete, 650 lbs. Due to the simplified construction, ordinary carpenter's tools and only average skill are required to build this boat. $2.00

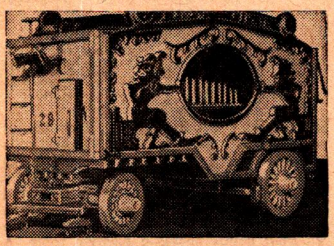
Multi-purpose Sloop—No. 106—**$2.00**

CIRCUS EQUIPMENT

7. ANIMAL DEN FOR YOUR MODEL CIRCUS. One of the most colorful pieces of circus equipment is the animal den or cage. This ¾ in. scale model has carved sides and two armored knights decorate the sides of the wagon. The model is 12 in. long. Complete details of construction, including an exploded view of the animal den, show you how to proceed with the building of the project. $1.00

17. WAGON FOR YOUR BIG TOP. One of the important pieces of rolling equipment used by every circus is the heavy wagon used to carry the canvas for the big top. This ¾ in. scale model will be a fascinating project to build. Our Craft Print gives a complete materials list, detailed drawings and easy-to-follow instructions. $1.00

15½. POLE WAGON FOR YOUR CIRCUS BIG TOP. No model circus layout is complete without a pole wagon. It is the heaviest piece of equipment on the lot. It carries the big poles that support the tent. Complete materials list, easy-to-follow drawings and photos, show you exactly how to proceed. $1.00



Steam Calliope—No. 163—**$1.00**

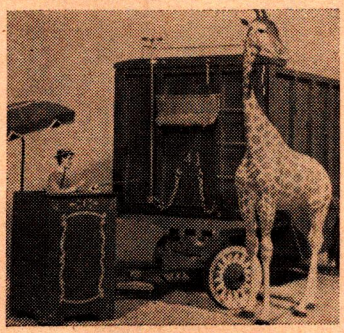
163. STEAM CALLIOPE. One of the most fascinating pieces of circus equipment. From this plan you can build an exact replica, true to scale, including boiler, pipes and keyboard. Detailed drawings and instructions explain how to cut the carvings, assemble the wagon, with a color scheme for painting and decorating. Complete materials list makes it easy to get started. Overall length, 12½ in. $1.00

172. CIRCUS SUPPLY WAGON. This wagon is always on the first section of any circus train because it carries the "makings" for breakfast on arrival. Its cargo of miniature boxes, bags, crates and barrels add atmosphere to the completed model. You'll enjoy building this authentic ¾ in. scale model. $1.00

178. HO GAGE CIRCUS TRAIN. A colorful circus train will add interest to your model railroad layout. Our Craft Print gives complete instructions and plans for building the flat car used in transporting the canvas wagon, animal den, seat wagon and dressing wagon. Fascinating to build! A valuable addition to your model circus collection. $1.00

189. HOT DOG WAGON. No model circus layout is complete without a hot dog wagon offering pink lemonade and hot dogs to its patrons. Every detail is explained in our plans, including the mustard jar for hot dogs. $1.00

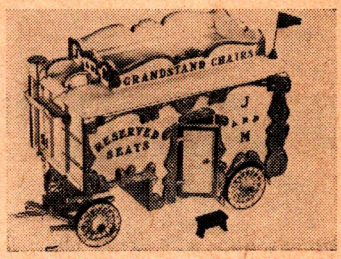
207. CARVED CIRCUS ANIMALS. To recapture the memories of the circus, you need to include the elephants, zebras and draft horses. Our full-size plans give simple instructions for carving these animals, plus painting the models. There's realistic, authentic and fascinating carving projects. $1.50



Giraffe—No. 211—**$1.00**

211. GIRAFFE FOR YOUR MODEL CIRCUS. The giraffe is a delicate animal in captivity. It is carried between circus lots in special padded wagons. Often he reaches a height of 18 ft. Our plans explain how to carve a giraffe to scale from a squared pattern and contour drawing. Step-by-step illustrations show you how to proceed. $1.00

237. MODEL CIRCUS GORILLA. The gorilla is generally rated the third most intelligent of the world's beasts, following the chimpanzee and the orangutan. A full grown male attains a height of 6 feet and weighs from 500 to 600 lbs. Your model circus should have a gorilla in the animal den and this plan will show you how to make a realistic one. $1.00.



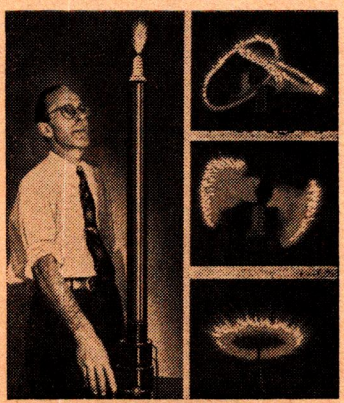
White Ticket Wagon—No. 249—**$1.00**

249. WHITE TICKET WAGON. "Step right up and get your tickets!" What a familiar ring this cry has at the circus. And a model of the White Ticket Wagon is a "must" for your model circus layout. Our instructions include the carvings that decorate the wagon, all construction details explained with drawings and photos, and a complete materials list. $1.00

284. MODEL CIRCUS LION. The lordly lion is an indispensable attraction at any real or model circus. The African lion modeled in this plan is ¾-in. to 1-ft. scale, larger than the average animal, which stands about 36¼ in. at the shoulder, but not as large as the record lion, which had a shoulder height of 45 in. $1.00.

ELECTRONIC & ELECTRICAL EQUIPMENT

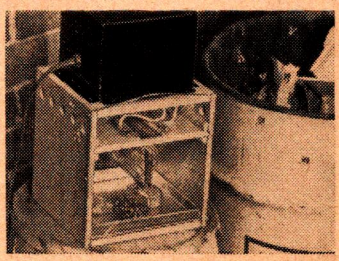
191. TESLA COIL. You'll get hours of satisfaction and thrills experimenting with this "Souped-up" Tesla Coil. You can perform more of the eerie electrical wonders than ever dreamed by Nicola Tesla in 1892. This coil develops 70,000 volts at 500,000 cycles per second frequency. Even though you'll be experimenting with 70,000 volts, the high frequency (500,000 cps) keeps it harmless. The original model of this project is on permanent display at the Museum of Science in Boston, Mass. Complete instructions, diagrams and materials list are given. $1.00.



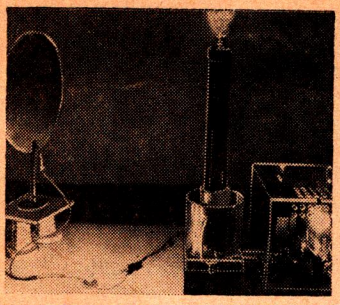
Tesla Coil—No. 191—**$1.00**

222. MOTION STOPPING STROBOSCOPE. If you want to know what is happening to a machine part that is moving at high speed, without turning off the motor, use a stroboscope. The stroboscope can be used to "stop" moving parts and study the movements of the parts in centrifugally-operated switches and clutches, or to inspect the shifting structure of a solid piece under centrifugal force at various speeds, or to read stampings or markings on the moving piece, or to find out what may be causing unusual noises in motors and engines that are running. Easy to build, inexpensive and practical. $1.00

224. FLY TRAP. This electrical fly trap may be used anywhere but it is an especially efficient eliminator of disease-bearing insects when used outside near rubbish barrels and garbage pails. The neat housing contains two sloping screen wire grids charged with 3000 volts from a small neon sign transformer. The flies enter the holes on the sides to get at the bait. They walk down the inclined grids, spaced wide at the top. When they reach a point where the spacing is such that the current makes a quick pass through them, they fall dead into the bottom tray. Works like magic! Get rid of the pests around your home. Build this trap. Complete plans. $1.00.



Electrical Fly Trap—No. 224—**$1.00**

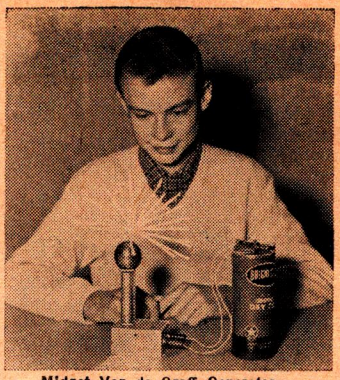


Tesla Coil—No. 290—**$1.50**

290. TESLA COIL. A miniature version of Craft Print No. 191, this Tesla Coil is an experimental piece of apparatus with sufficient capacity to demonstrate the majority of high-frequency current phenomena. High-quality performance is assured by advanced design, but cost is kept down through use of minimum of components and components obtainable through surplus outlets. Complete step-by-step, illustrated instructions are given as well as sources of supply for all otherwise hard-to-find materials. $1.50

301. 400,000 VOLT VAN DE GRAAFF ELECTROSTATIC GENERATOR. Capable of developing 400,000 volts but with a safe short-circuited current of 23 micro-amperes, this self-charging electrostatic generator is a lab-size working model of multi-million volt generators used for atomic research. Here is an experimenter's tool around which you can build many science fair projects. The cost of building this apparatus will depend on what materials you have on hand. $1.50

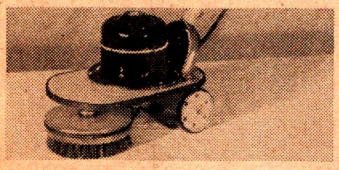
315. MIDGET VAN DE GRAAFF GENERATOR. Until we see a smaller one that actually works, we will call this the smallest in the world! Standing but 6½-in. high, it will develop 30,000 to 50,000 volts, depending on humidity. Yet the current is so small there is no shock hazard. Operating on 3 volts from two dry cells, it will perform the fascinating "satellite" and "electric wind" experiments as surely as its big brothers! Build the world's tiniest working model for $10 and run it on dry cells to perform electrostatic experiments for your science fair project! $1.00



Midget Van de Graff Generator—No. 315—**$1.00**

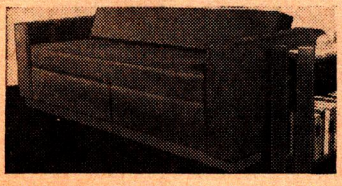
HOME FURNISHINGS & EQUIPMENT

193. ELECTRIC FLOOR POLISHER. A very powerful and efficient floor polisher can be built from an old Hoover motor and other discarded materials easily available. This polisher will save you hours of hard work and will put a beautiful polish on your floors. Complete instructions are given to put the motor in good working condition and to connect it to the polishing unit. The materials list shows parts needed and where to get them. You'll find this a handy appliance to have around the house. $1.00



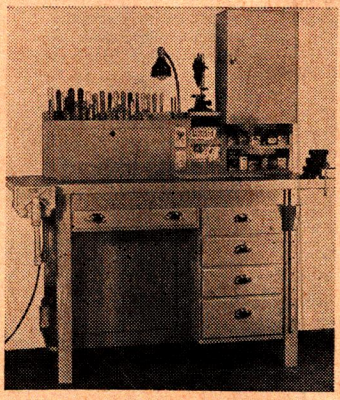
Electric Floor Polisher—No. 193—**$1.00**

194. CONVERTIBLE SOFA BED. A handsome living room sofa that becomes a double bed six-footers can stretch out on comes in mighty handy for bedding down overnight guests or as a third bed in two-bedroom homes. Our plans give detailed instructions and step-by-step illustrations showing how to build this project. $1.00

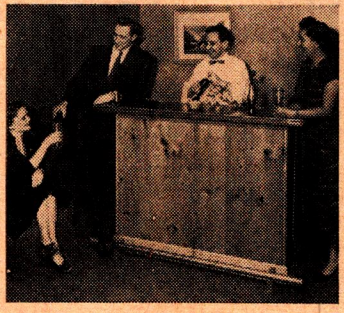


Convertible Sofa-Bed—No. 194—**$1.00**

217. MULTI-PURPOSE WORKBENCH. Occupies a minimum of floor area, yet this workbench has more than 11 cu. ft. of space for storing all the hand tools you'll need, including small portable electric tools and appliances such as a drill, sander, glue pot and soldering iron. Special features are: a generous-sized linoleum-covered working surface with a shaving trough; a compartment for sandpaper and sanding blocks; 5 roomy drawers; 2 tool cabinets; file and screw-driver racks; shelves; magazine holder; built-in electrical outlets complete with pilot light; overhead adjustable lamp; a supporting device for holding long work and a 20 x 22 in. drawing board. The overall working surface is 62 by 26 inches. Never before has such a versatile workbench been designed. Two large plan sheets. $1.50



Multi-Purpose Workbench—No. 217—**$1.50**

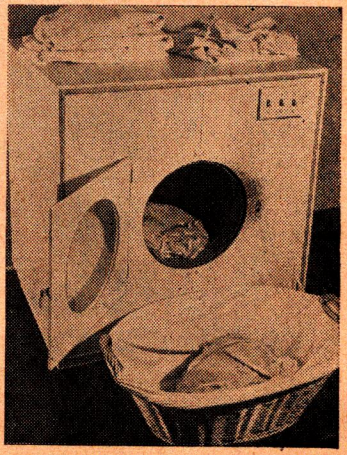


Portable Beverage Bar—No. 218—**$1.00**

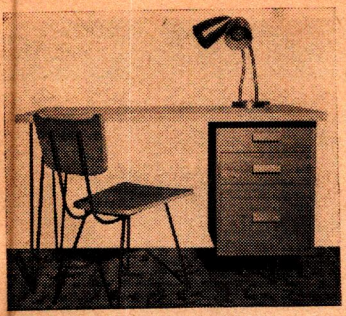
218. PORTABLE BEVERAGE BAR. Ideal for home or small apartment use, this beverage bar can be folded up into four lightweight pieces and stored in a clothes closet or carried in your car to a friend's house. The bar is large enough to accommodate six people comfortably and will be the center of interest at any house party. It can be constructed of knotty pine, wall-panel type plywood, mahogany, oak, grooved or sandblasted fir plywood—whichever best harmonizes with the room walls. Every step needed to explain the construction is given in detail. Build one for your next party. $1.00

220. 3-IN-1 SAWHORSE. This is not just another sawhorse, but a veritable workshop which will save you many steps around the house because it can be easily moved from one job to another. Hand tools can be stored in the space beneath the top, while bins located between the legs hold small portable electric tools. A shelf holds a carry-all tool box which, in addition to holding handsaws, plane irons and other hand tools, has a drawer for chisels, bits, screwdrivers and an assortment of nails and screws. The generous width of the top of the sawhorse provides a wide platform for use when painting walls and ceilings. Here is a sawhorse that should be standard in every home. $1.00

229. AUTOMATIC CLOTHES DRYER. Now you can build a 110-volt automatic clothes dryer for approximately $80.00. It will simulate sunshine and destroy odors and bacteria. It will take about 9 lbs. of clothes and dry them in 45 minutes to 1½ hours depending upon the type and weight of clothing material. Complete instructions, bill of materials and detailed drawings show you how to build this useful home appliance. $1.50



Automatic Clothes Dryer—No. 229—**$1.50**



Desk and Chair—No. 231—**$1.00**

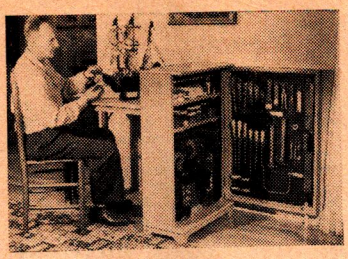
231. MODERN MATCHING DESK AND CHAIR. This artistically proportioned desk and chair of modern design is sturdy, functional and has a working-size top Three drawers, one of filing-drawer size provide plenty of storage for stationery, accounts and personal receipts, bills, etc. Construction is simplified by using large panels of veneered ¾-in. plywood which serve as both framing and covering material. Wrought iron legs and chair frame make this an interesting combination metal and woodworking project. $1.00

Kitchen Cabinets—No. 240—**$1.50**

240. KITCHEN CABINETS. Making and installing new natural wood finish kitchen cabinets and an over-the-range hood ventilator not only increases the value of your home but also gives your family the convenience of modern living at a low cost, since you save by building the cabinets and base-cabinet fronts yourself. Five different types of wall and base or counter cabinets are used to transform and modernize the kitchen. Complete building plans for each basic cabinet are included in this kitchen modernization program. Cabinets are designed so that they may be altered to suit the particular size and shape of your kitchen. No detail is overlooked. $1.50

Multi-Purpose Divider—No. 241—**$1.00**

241. MULTI-PURPOSE ROOM DIVIDER. Although this room divider has the appearance of a built-in unit, it is completely portable and may be moved about the same as other pieces of furniture. Its basic purpose is to separate two rooms but it can be used as a buffet for party snacks, a china cabinet, knick-knack display rack and storage unit for dishes, glassware and bottle goods. Helps to make your home more livable. $1.00



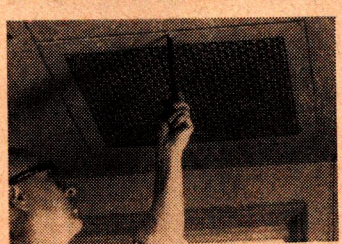
Fold-Up Work Bench—No. 244—**$1.00**

244. LIVING ROOM WORKBENCH. What appears to be a piece of furniture is actually a self-contained workshop designed specifically for hobbyists living in small homes or apartments. It will accommodate a general assortment of hand and electric tools, plus containers for paints, screws, nails and model or craft parts and has a combination shaving trough and tool holder. Convenient table height. When folded up, it occupies only 11½ x 25¼ in. floor area. All construction details thoroughly explained. $1.00

252. CONCRETE STAIRS. If you have always admired those neat concrete stairs with ornamental iron railings, here's how you can do it yourself at a big saving. You save in other ways too; the improvement will increase the resale value of your property, and concrete stairs will never rot and need replacement or painting. This plan shows how to build the concrete foundation wall, prepare and pour the concrete mix, finish the surface, and install the iron railings. Add beauty to your home. $1.00

253. ROLL-AWAY LAWN FURNITURE. By carefully nesting all of the pieces of this project together, you can make a cocktail table, two comfortable chairs and a chaise lounge from one sheet of plywood. A full-size pattern, plus detailed instructions for cutting, assembling and finishing this project are given. All you need do is to trace the pattern and start cutting the parts. Lightweight construction makes it easy to roll the entire set away for storage. $2.00

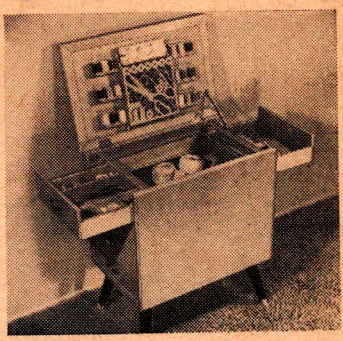
254. KITCHEN VENTILATOR. You can now easily carry away cooking odors and grease-laden fumes with a kitchen ventilator installed to your exact requirements. Whether you need a ceiling ventilator, a cabinet ventilator or a wall



Kitchen Ventilator—No. 254—**$1.00**

ventilator, this plan will show you how to build it. Explains the basic needs for each type of ventilator and which one will give you the best results. Enjoy the added comforts a kitchen ventilator will give your family by installing one now. $1.00

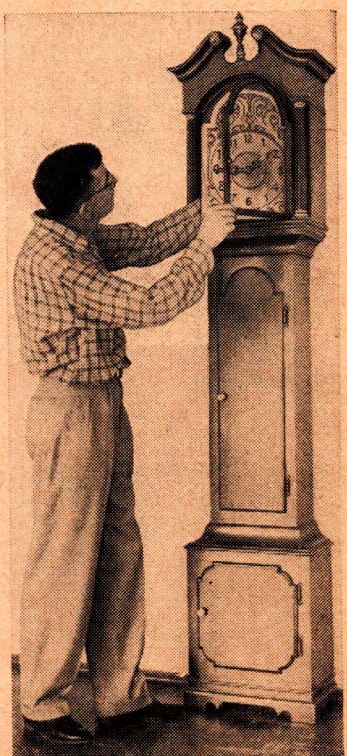
257. SEWING CABINET. At first glance this project looks more like a chairside end table than a sewing cabinet for it makes an attractive addition to any living room. Yet, it contains two half-length, tray-drawers at the top, a lid



Sewing Cabinet—No. 257—**$1.00**

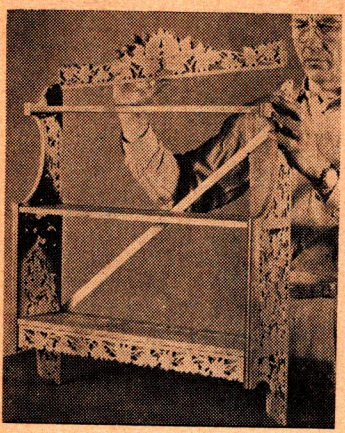
that holds spools of thread and dress patterns, a large 6-in. deep storage cabinet, and a full-length drawer at the bottom. The arrangement of the cabinet is such that you get maximum use of the space. A detailed bill of materials, step-by-step instructions, and large, clear drawings make it an easy job to build this project. The ideal surprise gift for your wife. $1.00

262. GRANDFATHER CLOCK. The grandfather clock with its tall case and mellow chimes emerges from the lore of the past as a doubly-prized possession. If constructed by the man of the house, it never lacks as a conversation piece in his home. This beautiful clock will add charm to your home and be of practical service, too. Two large plan sheets, with detailed drawings, bill of materials, and instructions, explain every step in its construction. $1.50



Grandfather Clock—No. 262—**$1.50**

JIGSAW PROJECTS

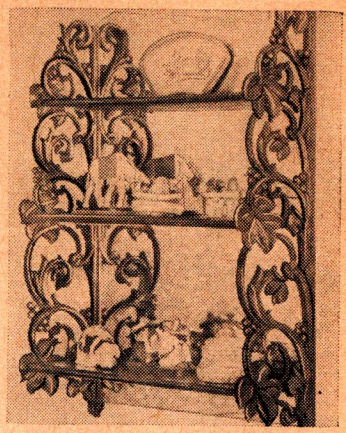


Wall Shelf—No. 26—**50c**

26. 18th CENTURY WALL SHELF. The scrolled grape leaf pattern of this shelf blends in with the design of this wall-piece for displaying figurines, vases and chinaware. It provides a project for the woodcraft hobbyist that may well be an heirloom in the years to come. Size: 23½ in. long by 26¾ in. high and 5⅝ in. deep. Full-size pattern. $1.00

90. JIGSAWED WALL SHELVES. Three full-sized patterns for making 1) a small shelf suitable for an electric clock or collector's items, 2) unique design of blond berries in relief, and 3) a lacy filigree design wall shelf that will add beauty and charm to any home. Complete instructions for making all 3 projects. $1.00

285. MIRROR-BACKED WHAT-NOT SHELF. A prime example of the decorative effect of pierced carving, this mirror-backed what-not shelf adds a distinctive note to any room in which it is hung. Full-size patterns. $1.00



Mirror-Back Shelf—No. 285—**$1.00**

MODEL BOATS

29. MODEL MOTOR SAILER "STAR DUST." This attractive 27 in. sloop will add nautical atmosphere to any recreation room or mantlepiece. Full construction details and bills of materials. $1.00

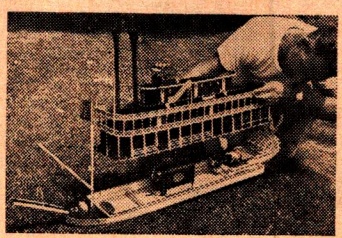
37. MODEL YACHT "SEA BREEZE." Model yacht racing is a sport every man and boy will enjoy. This trim model yacht is 36 in. long, has 487 sq. in. sail area, 42 in. mast, draws less than 6 in. of water, has deep fin keep and can be constructed of three-ply Weldwood. Designed for championship racing. $1.00

58. COAST GUARD LIFEBOAT. The construction of a 9-3/16 in. scale model of this seagoing lady is quite simple. It will make a splendid conversation piece for your den or recreation room. Detailed drawings, list of materials and step-by-step instructions make it easy to build. Every model builder interested in the sea should build this project. $1.00

151. ELECTRON III. Here is the very latest in scale model cabin cruisers—a model that will run rings around any single channel radio-controlled job on the water. A unique remote control system permits you to run it without any expensive radio transmitters or receivers. What's more, no FCC license is required to operate the remote control unit. You just aim a beam of light, from shore, at the rotating photocell on the model and she responds to your command. It's fantastic! It's fun! And you can build one easily from our plans and instructions. All parts are readily obtained. $1.50

181. COAST GUARD PATROL BOAT. Model of YP class wooden hull patrol boat used in World War II along the shipping lanes along the Atlantic Coast to hunt Nazi submarines. Built to ¼ in. scale. Has forward anti-aircraft gun and dummy depth charges that operate by delayed action. You can install a small electric 6-volt motor or ½-A Class gas motor for power. Every step in construction clearly explained. Two large sheets. $1.50

196. DIXIE BELLE RIVER BOAT. Now you can recapture a bit of Mark Twain's Americana by building an authentic 40 in. steam-powered operating model of a Mississippi Stern-Wheeler or a 20 in. shelf model. All construction details, materials list and procedure given. $2.00



River Boat—No. 196—**$2.00**

205. SEA-SLED. A streamlined airfoil-type hull enables this 14 in. racing boat to zoom over the water at a fast clip. Sea-Sled weighs only 5 oz. and, with a powerful Wasp or any .049 cu. in., gas engine, it will give hot competition to any boat on the lake. Construction is ultra-simple so you can build a Sea-Sled in one day and race it the next. Plans are full-size. $1.00

214. LITTLE SQUIRT FIREBOAT. This model is radio-controlled so that it can be maneuvered in the water by a remote transmitter. Even the water pump, which shoots a stream of real water through its gun-type nozzles, is remotely controlled. Two electric motors drive the boat at a

Fireboat—No. 214—**$2.00**

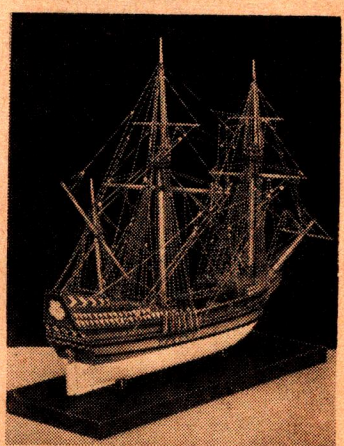
fast clip as though it were in a hurry to get to a fire. Three large plan sheets explain every detail of construction. $2.00

256. HASTY HORNET, JR. Weighing less than 16 ounces, this 16½-in. long, sleek model hydroplane with its battery-powered outboard motor will speed along at well over 30 scale miles per hour. It's a one-eighth scale model of our famous high-speed hydroplane "Hornet" (Craft Print 161) that has won so many races.

Model Hydroplane—No. 256—**$1.00**

Full-size plans make it easy for you to build this project. If you want speed, fun and thrills at your next model show, build "Hasty Hornet, Jr." $1.00

275. THE MAYFLOWER. In 1951 naval architect Wm. Baker began drawing up plans for an authentic, full-size replica of the original "Mayflower." In 1957 this replica battled its way, under full



The Mayflower—No. 275—**$1.50**

sail, across the Atlantic from Plymouth, England, to Plymouth, Mass. This model, also emphasizing authenticity, is based on Baker's replica. Built to a scale of ⅛ in. to a ft., it is an ideal mantelpiece size. $1.50

309. CAMPER FOR PICK-UP TRUCK. Built with a roof that can be quickly raised and lowered, this pickup camper will give you the stand-up headroom of a large heavy camper, yet it still retains the driving advantages of the small camper which folds down for traveling. Lightweight and of sturdy construction. The collapsible roof feature reduces gas-wasting wind resistance, and sway bracing isn't needed for cornering or bucking a strong wind. Build it yourself for $100, a savings of $500 over a similar factory-built job. $1.50

Pick-up Truck Camper—No. 309—**$1.50**

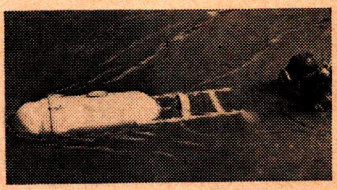
314. CAR TOP CAMPER. The increasing popularity of station wagon camping has caused it to become more and more a family affair, demanding additional space for sleeping and carrying extra equipment. The quick-fold car top camper solves these problems with one compact unit that can be attached to or taken off your station wagon in minutes. Mosquito-proof full-length sleeping shelter for economical touring. Fits station wagons and sedans too! Cost of the camper with ready-made shelter is about $128, and you can save an additional $20 by making the shelter at home. $1.00

Car Top Camper—No. 314—**$1.00**

318. ISON RACING KART. Designed strictly as an all-out racing machine, this "roadster" style kart is suitable for A, B or C class racing. It boasts such features as live axle rear end, racing brakes, and light overall weight with forward weight distribution for high performance in competition. With twin Mc-6 engines its performance is impressive = with two of the new Mc-20 engines, it should be a track-eater of the first order. $1.50

Ison Racing Kart—No. 318—**$1.50**

320. SCUBA SCOOTER. Water is 800 times as dense as air—this you realize as you kick your way through it in your diving outfit, using up your air supply in the effort of swimming. All this hard work is done for you by the Scuba Scooter which you can build for $175 or less. The unit can be weighted for ¾ or 1 pound positive buoyancy underwater, so that if let go, it will slowly rise to the surface. Control is automatic; if you grasp the handle at the switch, the motor turns; if you release it, the motor stops. $1.50



Scuba Scooter—No. 320—**$1.50**

TOYS

99. SCHNAPZY WIG-WAG DOG. His tail wiggles and his body waggles as he walks. Just what that youngster of yours craves—action galore. Easily made from scrap lumber in one evening. Only simple tools needed. When finished, you have a toy that the kids will love. Full-sized pattern. $1.00

14. BOUNCING BUNNY. This pull toy produces lots of action. As your youngster pulls the bunny it simulates a bouncing effect that reminds you of a rabbit scampering away in the garden. Children get a big kick out of it. Made of plywood. Full-size pattern. $1.00

212. MINIATURE SPEEDWAY. Now you can have a miniature speedway and put on "races" that will simulate the Indianapolis races. The whole layout includes a race track for model Ferrari cars, grandstand, judge's stand, car pits for refueling (new batteries, that is), guard rails and the gay decorations that are always out for the race. You can mount the track on two 4 x 4 ft. pieces of plywood for easy storage. The two Italian Ferrari racers are built to a scale of ½-in. equals 1 ft. The HO-Gage brass rail down the middle of each track keeps the cars in line. You can have loads of fun simulating actual racing events. Full-size drawings are given for all necessary parts. Two large plan sheets make the construction details clear and easy. $1.50

226. FUN-ROOM CIGARETTE LIGHTER. This is without doubt the goofiest, most complicated cigarette dispenser and lighter there is. It would probably come under the heading of Basement Game-room Gimmicks, although it could and has been used as a TV, office and party gag on many occasions. If you have the reputation of being an inventive or mechanically minded type of person, you'll have a lot of fun with it, offering your friends a cigarette and watching the look of amazement on their faces as the machine automatically goes through a series of mechanical movements with chain reaction regularity until a match is ignited. After a short pause, the match is extinguished with drops of water, again automatically controlled. You can find most of the material to make this gadget around the house. Have fun! $1.00

230. ELEVEN TANTALIZING PUZZLES. Do you like to work puzzles? If you do, this Craft Print gives plans in actual size for making 11 puzzles from bits of wire, wood, plastics, string or cardboard. They will give you endless hours of fun and enjoyment. Puzzles make excellent gift items, or if you are going to have a dinner party, use puzzles as an "ice breaker" or offer prizes to those solving the puzzles first. They're loads of fun. You can also build up a profitable business by supplying puzzles to gift shops, cigar stores, etc. $1.50

234. ELECTRIC DART GAME. You can really ring the bell with this dart game if your aim is good. The red-ringed bullseye circle in the center not only rings the bell when hit, but also lights up a red jeweled lamp. If your dart strikes one of the different colored circles surrounding the bullseye, a light of the same color will glow at the top of the target. A hit in the bullseye counts 50 points, and one in any of the surrounding circles counts 10 in scoring. Built from easily obtained materials. Pictorial wiring diagrams, drawings and photos show every step to make this fine game. $1.00

236. MUSCLE-POWER MEASURER. The way to get a good grip on yourself is to practice with this game room machine. Although built primarily for fun, it is an ideal hand exerciser. And your family and friends can have a whale of a time finding out who has the strongest grip from week to week. The machine registers 25, 50, 75 or 100-point grip. How strong are you? Test your grip with this muscle-power measurer. Our plan gives construction details, wiring diagram and complete materials list. $1.00

243. TOY ELECTRIC MOTORS. Toy electric motors come in two types—windmill and engine. This plan explains how to build BOTH types, and both will operate from a 3-volt battery. Detailed drawings, photos and materials list make it easy to build these toy motors. Not only will they furnish endless hours of enjoyment but they make an interesting project to demonstrate the conversion of magnetic energy directly to mechanical motion. $1.50.

263. TABLE-MODEL BOWLING ALLEY. Not just a toy, this game requires plenty of skill. Experienced bowlers have scored from 135 to 247, and as yet haven't solved the consistent-strike formula. Just when you feel it's a cinch to play this game, and your ball hits the head pin squarely on the nose, you wind up with a split between the #7 and #10 pins almost big enough for a parking lot. This miniature alley is accurately scaled to approximately ⅛ that of the standard bowling alley, with the exception of its length, which is somewhat shorter to allow for practical table-top playing. Its an ideal game for your recreation room. You can form teams and run tournaments. "Headpin Charlie" does your bowling for you so it is up to you to position him correctly behind the foul line and give the "ball" the proper speed. You'll be amazed at the skill required to match your league average. Detailed drawings show how to build this splendid project. Instructions for playing and keeping score are included. $1.00

Use This Handy Order Form

SCIENCE AND MECHANICS MAGAZINE
505 PARK AVENUE—DEPARTMENT 2169
NEW YORK 22, NEW YORK

Enclosed is $_____ for which send me the Craft Prints I have circled below:

No C.O.D.'s or stamps please! Because of the excessive charge made by the US Post Office on C.O.D. shipments, we recommend that you save this fee by sending your remittance with this order. We guarantee complete satisfaction or your money will be refunded immediately.

These Plans Are $1.00 Each

7	17	19	20	23	26	29	30
37	53	58	64	90	99	147	156
163	172	178	189	191	205	211	222
224	226	231	234	236	237	241	244
249	252	254	256	257	263	284	285
314	315						

These Plans $1.50

207	212	230	240	243	262	275	290
301	309	318	320				

These Plans $2.00

106 214 253

SPECIAL QUANTITY DISCOUNT

If you order two or more Craft Prints at one time, you may deduct 25¢ from the regular price of each plan. Hence, if you order 2 plans you deduct 50¢; 3 plans, 75¢; 4 plans, $1.00; etc. Circle the numbers of the Craft Prints you want and enclose remittance with this order form.

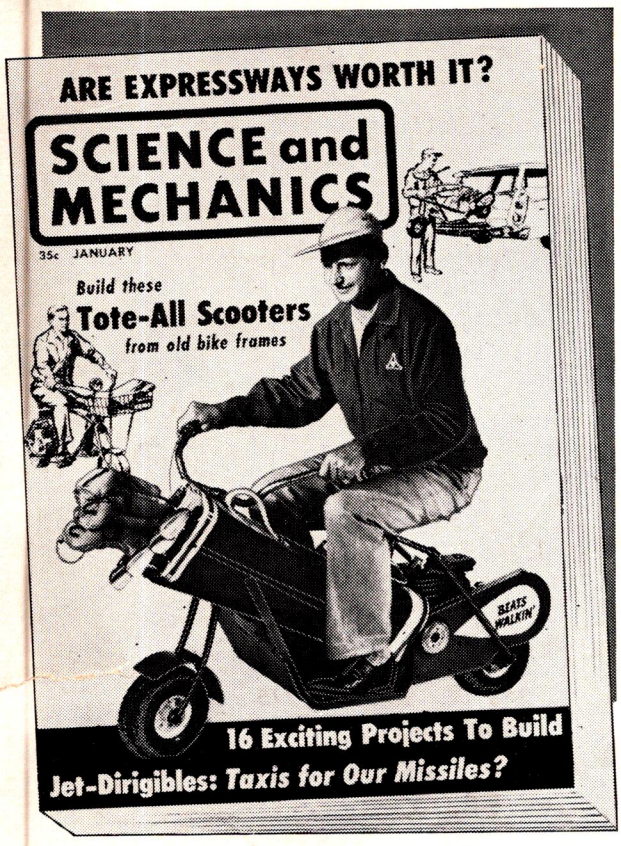
NAME _____

ADDRESS _____

CITY AND ZONE _____

STATE _____

Coming in the Jan. Issue



Checking-out the

'62 RAMBLER AMERICAN

How to Buy a

CHRISTMAS TREE

Test Report

V-6 BUICK SPECIAL

"The monthly magazine for craftsmen"

. . . with these HOW-TO-DO-IT articles with step-by-step instructions

Daylight-proof slave flash unit

Portable ice fishing shack

Make your own picture frames

On Sale Nov. 28th

AT ALL NEWSSTANDS

NOW- AMAZINGLY POWERFUL NEW AIDS HELP YOU

HYPNOTIZE IN MINUTES!

HYPNOTISM RECORD

FASCINATING ECHO-CHAMBER BACKGROUND & FREE EYE FIXATION DISCS. Use to help HYPNOTIZE SELF & OTHERS!

Listen to the dramatic, powerful way the Hypnotist weaves suggestions around the unique beat of an Electronic Metronome coming from an echo-chamber. Play side one to help you hypnotize others, in groups or individually. Record ends like this: "the next voice you hear will take complete control of your hypnotic sleep . . .", then you take over as the metronome continues to beat. Side Two helps in Self-Hypnosis — ends by giving you a suggestion for re-hypnotizing yourself, then awakens you. Use this record on others — study it too. Learn what a hypnotist says and how he sounds. Imitate his words and timing. An ideal aid for professionals and serious students. Made of unbreakable vinyl, this is a quality 78 rpm Extended Play recording and is complete with FREE Eye-Fixation discs and instructions.

No. RTN.....(Reg. $4.95) SPECIAL PRICE $3.95 ppd.

ACTUALLY HYPNOTIZE WITH THESE AIDS OR YOUR MONEY BACK!

SPECIAL!
Limited Offer for Magic Handbook Readers . . .
SAVE 20%
Reg. Price — $4.95.
SPECIAL! $3.95 ppd.

FREE!
Trance-Fer Chart

DISGUISED HYPNOSIS

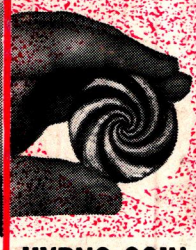
Now revealed, the jealously guarded secret techniques used by experts to cause the hypnotic trance without the subject's knowledge. Learn the effective but harmless "Secret Nerve Pressure" technique . . . how a failing back test is converted into an instant trance, etc. Read, for the first time anywhere, how the author hypnotizes a roomful of people with the aid of a common household cooking ingredient. Order this sensational book now and get the "Trance-Fer" Chart FREE. Use it to help you cause the indirect "disguised" trance.

No. DH .....$1.98 ppd.

MYSTIFYING TESTING KIT

This fascinating set tests the "neuro-muscular" repsonse of your subjects. However, there is a secret that enables you to call and control the direction they swing the pendulum in—even against their will. Subjects are so mystified and impressed with your "power", they become more susceptible to your hypnotic suggestions. Complete with weighted pendulum, ring, Optic Directional chart and instructions.

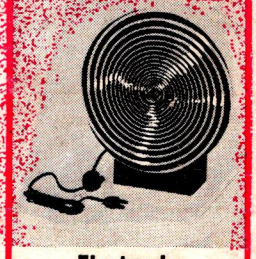
No. TK ..... $1.98 ppd.



HYPNO-COIN
Vibrating Lens

Hold the Hypno-Coin in front of the person you want to hypnotize. Gently vibrate it. The plastic lens sets the hypnotic pattern into motion. While your subject's gaze is transfixed to this whirling pattern — give the hypnotic suggestions outlined in the Instruction Booklet. Many hypnotists mount this coin onto Tie Pins, Wallets or other objects — keeping it handy and always ready to use. Complete with revealing secrets and instructions.

No. C ..... $1.00 ppd.



Electronic HYPNOTISM MACHINE

Plug in and flip the switch . . . the disc spins, quickly transfixes your subject. His attention is riveted to the powerful hypnotic pattern. The "Whirlascope" also gives you "professional" prestige and hypnotic expectancy. A sensational aid for self-hypnosis and hypnotizing others — singly or in groups. Has 10" disc, switch, handle, instructions and a silent, trouble-free 110V A.C. motor.

No. SS .....$13.95 ppd.

HANDBOOK of SELF-HYPNOSIS

A truly revealing boo dealing exclusive with Self-Hypnosis. Written by Harry Arons a most respected and renowned hypnotist who gives you clear, easy to follow instructions and varied techniques. Hard cover — 144 absorbing pages.

No. SHH ..... $3.95 ppd.

Keep this coupon intact, use the HANDY ORDER FORM ON PAGE 5

FREE!
"Entertaining with Hypnosis" given with orders for $1.98 or more.

10 DAY UNCONDITIONAL MONEY BACK GUARANTEE!
You may return any item within 10 days for a prompt, full refund — no questions asked.

MAIL NO RISK COUPON TODAY!

HYPNOTIC-AIDS
Dept. PX-2
1133 Broadway
New York 10, N. Y.

Send_____
Enc. $_____
Name_____
Address_____
City_____State_____